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ABSTRACT

Clustered Business Occupations Reading Strategies is one of four instructional guides developed to assist teachers working with students considered disadvantaged because of reading deficiency. Section 1 concerns readability and gives procedures and guidelines for collecting samples. Section 2 briefly describes the Cloze procedure and its usefulness as a reading test and teaching technique. Informal assessment is the focus of section 3. Three informal assessments with sample answer sheets and suggested-approximate answers are provided. Section 4 is an introduction to the guide (sections 5-10) which offers ideas and procedures for integrating reading skills with the occupational content (vocational textbook). Sections 5-8 each present a set of content reading skills: vocabulary skills, comprehension skills (paragraph), comprehension skills (recognizing and recording complex information), and study/reading skills. Each skill is divided into segments requiring 5-20 minutes of class time for introduction and practice. Homework uses text assignments normally required. Each section introduces a skill, uses a variety of vocational examples to clarify it, provides exercises to apply and master the skill, and offers teaching suggestions. Section 8 also includes a section on suggested reinforcement activities. Section 9 offers guidelines for making a reading assignment. Section 10 makes further suggestions for reading skills development. (YLB)

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CLUSTERED BUSINESS OCCUPATIONS READING STRATEGIES

1981 Vocational Reading Series

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CLUSTERED BUSINESS OCCUPATIONS
READING STRATEGIES

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VOCATIONAL READING SERIES

Division of Occupational and Vocational Studies
The Pennsylvania State University

Pennsylvania Department of Education
Bureau of Vocational Education

1981

FORWARD

Education amendments in 1976 (P.L. 94-482) provided for special assistance to a wide variety of students with "special needs." The special needs of these students are derived from conditions of the students which are believed to inhibit success in vocational programs. Both handicapped and disadvantaged individuals are to be served by the legislative provisions.

Academically disadvantaged students are those individuals who, because of math, reading, or communication deficiencies, may not be able to succeed in vocational programs. Legislation has provided for research and development projects to address the needs of these individuals. The projects in progress have been designed to respond to that call for research and development.

This instructional guide was developed for the purpose of assisting Business Occupations Teachers in their work with students who are considered disadvantaged because of reading deficiency. It was developed as a result of vocational reading research at The Pennsylvania State University. The guide was intended to be field tested in selected classrooms in 1981, funded by the Pennsylvania Department of Education.

"Clustered Business Occupations Reading Strategies" have been developed according to certain distinct characteristics of reading requirements in vocational education:

(1) Reading is a vocational skill, one that requires reading abilities that differ from those associated with general literacy.

(2) There is a difference between curricular literature (textbooks and other literature which must be read in the context of student status) and occupational literature (manufacturers instructions, codes, specifications, safety warning, etc.).

(3) Occupational reading skills are appropriately addressed in the vocational curriculum.

(4) There are strategies available to vocational teachers which need little or no reading specialization.

(5) Available strategies reflect the unique qualities of vocational reading, address general vocational reading skill requirements, and are useful for helping students disadvantaged because of reading deficiencies.

This guide in NOT intended to be envisioned as the final word in reading strategies. It contains examples of several strategies believed to be useful for the vocational instructor seeking methods that are specifically related to business occupations instruction. The instructors are responsible for taking these examples and applying them to their occupational specialties. Not all of the methods will work for all business occupations teachers

or their respective students. The methods were designed to be adapted, not rigidly adhered to.

Companion R & D projects at Penn State provide useful complementary aids. An Employability Skills Curriculum Guide (Wircenski, McPherson, Feng, 1980) is available. That guide addresses socialization, financial management, values clarification, job procurement, and communication skills. Three other occupational clusters (Construction, Health, and Trade & Industrial) will be the basis for reading strategy guides. These guides will focus more specifically on the respective individual occupational areas utilizing a format similar to the business occupations guide.

Field testing during the 1981-82 school year is expected to result in additional refinements of the several reading strategies. Criticism and recommendations are invited by all who receive these materials. Correspondence should be addressed to:

Director
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119 Rackley Building
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L. Jay Thornton, PhD
Project Director
1981

ACKNOWLEDGEMENTS

The Vocational Reading Series, of which this book is one part, has resulted from research conducted by the Division of Occupational and Vocational Studies, The Pennsylvania State University and the Bureau of Vocational Education, Pennsylvania Department of Education. Many people, not expressly identified as part of the project, have served willingly in the dispatch of its objectives. Appreciation is especially expressed to Mr. Wayne Grubb, Consultant for Disadvantaged and Handicapped, Bureau of Vocational Education, Pennsylvania Department of Education, for his support and procedural advice.

Several Area Vocational-Technical Schools in the Center Region of Pennsylvania participated in the development of the series. Scores of manufacturers, publishers, and employers provided literature and information. A listing of the schools, manufacturers, publishers, and employers follows. The project would have been impossible without their help.

Two research efforts provided considerable information toward the development of the series. The first, Basic Reading Skills and Vocational Education, was published by the National Center for Research in Vocational Education under the auspices of the Knowledge Transformation Project. That publication was supervised by Dr. Carol P. Kowle. The second, Review and Synthesis

of Reading In Post-Secondary Occupational Education, was published by the Division of Occupational and Vocational Studies in conjunction with the Division of Education Administration Policy Studies and The Pennsylvania Department of Education. Both titles are available directly from their respective publishers.

Appreciation is expressed to Mrs. Linda Cartright for her careful attention to the typing and proofreading of not only the final drafts of each title in the series, but all the preliminary work and intervening drafts required. The assistance of Edie Johnson, Division Secretary, and Jan Drew, Division Budget Secretary, is especially appreciated.

DISCLAIMER

The activity which is the subject upon which this guide was based was supported in whole or in part by the U.S. Department of Education. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Department of Education, and no official endorsement by the U.S. Department of Education should be inferred.

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SECTION 1
READABILITY

In order to plan for intervening in situations of reading deficiency, several pieces of information are required. First, it must be known how urgent the need to read actually is, in the context of both curriculum and occupational requirements. This does not suggest that reading, in the general literacy sense, may not be important. Educators clearly recognize that reading ability is crucial if learning is to occur. What this first question addresses is an examination of objectives and their component tasks to ascertain how much reading is required to complete the tasks and, ultimately, the objectives of the course.

Although there has been little research to date to distinguish between curricular and occupational reading requirements it is not difficult to visualize differences between textbook reading and, for example, manufacturers maintenance manuals. Effectively, there are two kinds of reading: that which is required to read the textbooks (curricular) and that required to read the manufacturer's instructions (occupational). Previous research (Thornton, 1977; 1979; 1980; 1981; Thornton, Waters, and Lee, 1980) suggests that there could be significant differences in the readability level of sections of textbooks dealing with specific tasks and the readability level of literature pertaining to the performance of those tasks.

It is a fact that reading literature peculiar to an occupational specialty at least implies that some form of reading is a vocational skill. Thus, the second bit of information must be collected. It must be known (or decided) if the teacher, the school, and the

school district intend to address reading within the vocational curriculum or as prerequisite skill. If reading is to be dealt with in the vocational curriculum, then all students must receive some form of vocational reading instruction. If, however, reading skill is envisioned to be prerequisite then the thrust of reading in vocational settings would be toward dealing with deficiencies. The strategies, in the latter situation, would be individualized and delivered on a case by case basis.

The previous two pieces of procedural information are fairly general; the third and fourth are specific. The third deals with how difficult literature in a specific occupational curriculum is to read. What is the readability level? The fourth deals with how able students are in terms of reading ability. Can students read literature necessary to succeed in a vocational program? We shall deal with these issues separately.

Readability Procedures

Readability procedures are devices to estimate the grade reading level (GRL) of selected pieces of literature. In other words, a readability analysis determines the approximate GRL a person must possess in order to read the literature analyzed. Note the underlining of estimate and approximate. It must be cautioned that, although these procedures have been validated by extensive research, they are not the sole determinants of readability. Muncrief (1975) discussed a variety of other considerations that

are involved in readability assessments. For our purposes of matching literature assessment to student ability an index of readability is a useful measure.

There is a second caution needed about readability procedures. Preliminary results of current research (Thornton, 1981) brings up serious questions about trying to find an average readability level of occupational literature. For example, what does it mean that the average (the word "mean" is normally substituted for the word "average") readability level of a textbook is ninth (9th) grade? Because the word average or mean is used, it can be assumed that some of the literature is higher than ninth and some of it lower. What the average does not tell us is the range of readability levels and the concentration (mode at any level) of readability level.

In order to make sense out of that argument, a little must be known of how readability assessments are done. When analyzing a textbook (or any other lengthy piece of literature) random samples are selected. These samples are analyzed and an average of all of their readability levels is calculated. That average is the mean readability level of the literature. We will get more explicit about how this is done in the next section.

To point out the problem with using the mean (average) some hypothetical samples have been graphed below. The graphs show the curve which would result if the frequencies of grade level of samples were plotted on the graph. The vertical axis of the

graphs represents the frequency that samples were found to be at a particular grade level. The horizontal axis represents the specific grade levels. (See Figure 1)

All of the preceding graphs are of books at the ninth grade readability level. But they all differ in the concentration (mode) of levels. The point here is simply that the mean or average can be a deceptive statistic. The analysis can still be useful, providing the results include the range and distribution of readability scores sampled, and the mean is ignored.

Two readability procedures will be discussed: (1) Fry procedure (See Figure 2); and (2) Flesch procedure (See Figure 3).

Figure 1: Sample Readability Graph

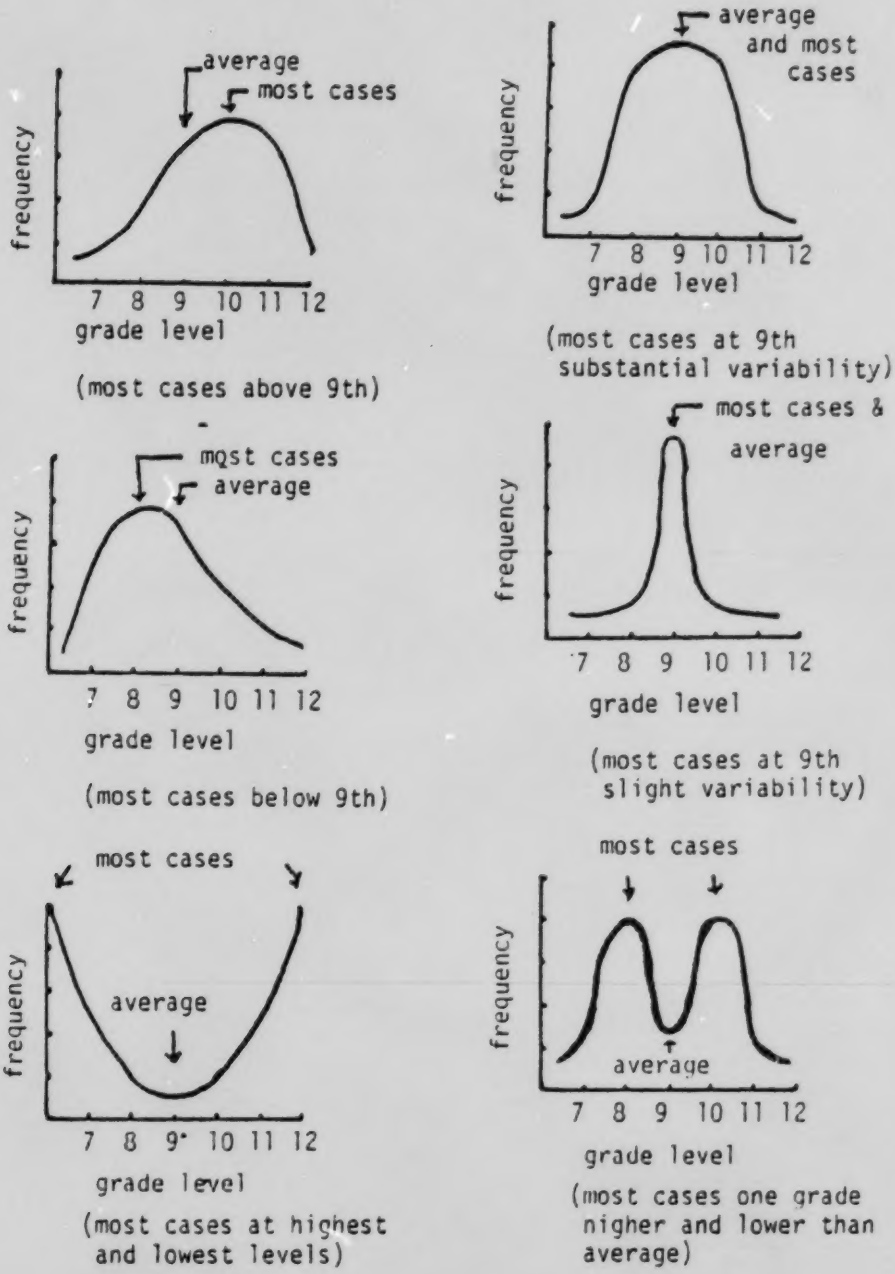


Figure 2: GRAPH FOR ESTIMATING READABILITY
by Edward Fry, Rutgers University Reading Center, New Jersey
Average number of syllables per 100 words

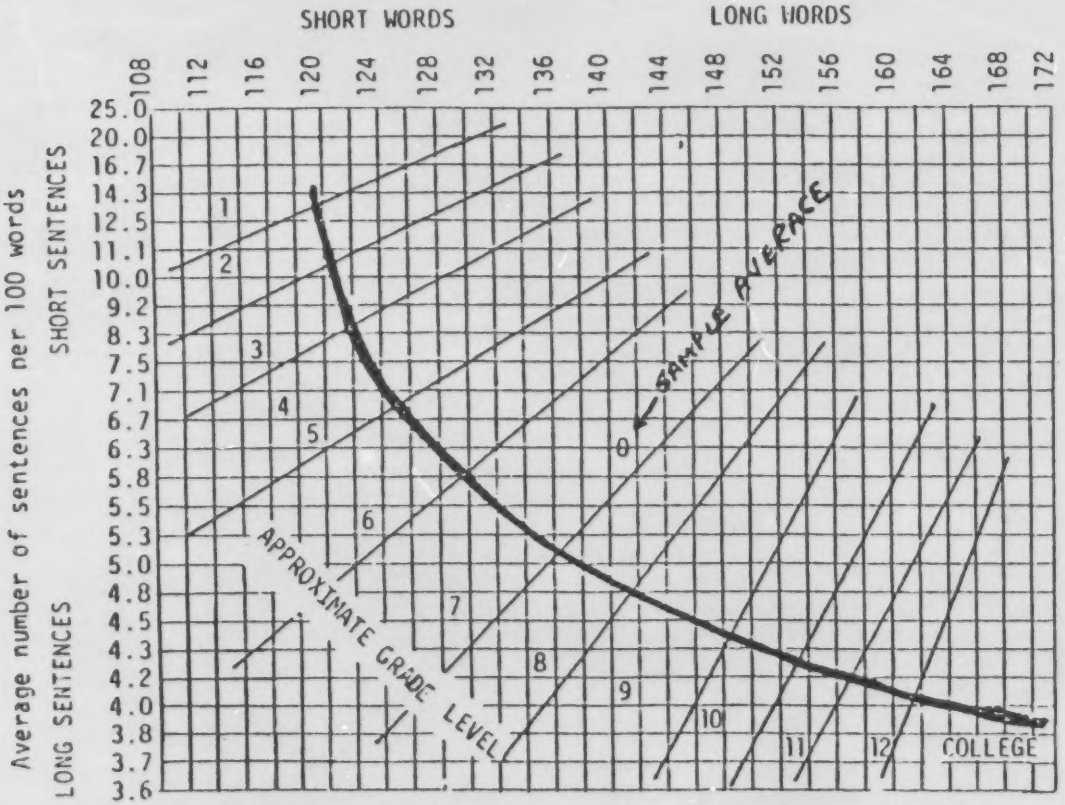


Figure 2 (Continued)

Directions: Use a stratified random procedure, at least five percent for books, more for shorter materials. For example: If a book is 350 pages long, five percent equals 17.5. 350 ÷ 17.5 equals 20. Select a starting number, for example: 6. The first sample page is 6; then 26; then 46; then 66; etc. If one of the pages has no text proceed one page at a time forward until a page is found from which a sample can be taken.

From each of these pages select 100 word passages (alternate positions on page from which taken. For example: beginning, middle, ending). Plot the average number of syllables and average number of sentences per 100 words on the above graph.

This will give you the average readability of the book.

Example:

	Syllables	Sentences
First 100 Words	124	6.6
Second 100 Words	141	5.5
Third 100 Words	158	6.3
Average	141	6.3

Then plot the syllables and sentences for each sample. This will illustrate the range of readability for the literature being analyzed.

(For further information and validity data, see April, 1968 Journal of Reading and March, 1969 Reading Teacher.)

Figure 3: FLESCH READABILITY FORMULA PROCEDURE

There is one readability procedure that is easily used with the assistance of a simple calculator. The Rudolph Flesch (1949) Readability Formula involves a count of the syllables in the sample and words per sentence in conjunction with a mathematical formula. The result is a "Reading Ease Score" which translates into grade reading level.

I. 1. Count the words in the sample (100 words or more, if available).
2. Count the number of sentences.
3. Divide the total number of words by the total number of sentences.
4. Multiply that total (average number of words in a sentence) by 1.015.

II. 1. Count the syllables in the sample.
2. Multiply the number of syllables by 100.
3. Divide that total by the number of words in the sample.
4. Multiply that total by .846.

III. Add I and II.

IV. Subtract III from 206.835.
That is the reading ease score. It translates accordingly:

R.E.Score	Grade	R.E.Score	Grade
115-120	1	80- 89	6
110-114	2	70- 79	7
105-109	3	60- 69	8.5
100-104	4	50- 59	11
90- 99	5	30- 49	14.5
		0- 29	College Grad.

Flesch, Rudolph. The Art of Readable Writing. New York: Harper and Brothers, 1949.

The textbook sample in Figure 4 demonstrates the rules.

Instructions for Calculations

WORD COUNT - Fry: Count all words up to 100 words (may end in partial sentence). Flesch: Count all words up to approximately 100 (end of full sentence).

Numbers - such as 30, 1951, 27-A, L78G are each counted as one word.

Hyphenated words - one word.

Abbreviations - one word.

Acronyms - such as PVA, NSU, USA, AVA are each counted as one word.

SENTENCES - Fry: Count the sentences and determine the tenth of a sentence when ending in a partial sentence. Flesch: Count all sentences.

Headings (paragraph headings) - one sentence.

Parenthetical expressions - (enclosed in brackets) is one sentence even if contained in another sentence.

Semi-colon or colon - If there is a semi-colon or colon in what we usually consider a sentence, that is considered to be another sentence. The easiest way to handle that is to count one sentence overall and add one sentence - count for each colon or semi-colon in the sentence.

RECORDING - Fry: Write down the number of sentences per 100 words. In the example the 100th word is "requires." There are 5 full sentences, plus the partial sentence ending in "requires." There are 7 words up to and including "requires" and 21 words in the

FIGURE 4: SAMPLE WITH WORD COUNT OVER WORDS

```
  1     2       3  4    5         6    7
  A SUBROUTINE IS A STANDARD SEQUENCE OF

   8          9      10   11    12    13
INSTRUCTIONS DESIGNED TO DIRECT THE COMPUTER TO

 15  16 17    18         19           20
CARRY OUT A SPECIFIED OPERATION.  ORIGINALLY,

 21   22     23         24    25 26   27     28
THESE BASIC ROUTINES RECORDED IN A COMPUTER INPUT

  29   30     31    32  33   34     35    36  37
MEDIUM WERE INCLUDED IN THE SOURCE PROGRAM AT THE

  38    39    40    41       42   43   44  45  46
PROPER PLACE AND ASSEMBLED ALONG WITH THE REST OF

 47   48       49  50    51     52     53        54
THE PROGRAM.  IN OTHER WORDS, THE SUBROUTINES HAD

55 56    57    58  59   60    61   62   63    64
TO BE INSERTED AT EACH POINT THAT THEY WERE NEEDED

65 66  67    68  69   70   71    72    73 74  75
IN A ROUTINE AS SHOWN IN FIGURE 13-1.  AS A RESULT

 76   77     78    79  80  81      82          83
THEY WERE INCLUDED IN THE MAIN OPERATIONAL SEQUENCE

84  85   86     87        88   89   90  91  92
OF THE OBJECT PROGRAM.  THESE ARE KNOWN AS OPEN

   93
SUBROUTINES.

   94   95      96       97  98  99    100
    A CLOSED SUBROUTINE IS ONE THAT REQUIRES

  101       102  103  104 105 106 107  108
PROGRAMMING ONLY ONCE SINCE IT MAY BE ENTERED
```

FIGURE 4 (CONTINUED)

```
109  110    111  112 113 114
FROM SEVERAL POINTS IN A PROGRAM.  AS A MEANS OF
AVOIDING REPETITION OF THE SAME SEQUENCE OF
INSTRUCTIONS IN DIFFERENT PLACES IN THE MAIN
ROUTINE, CONTROL MAY BE TRANSFERRED TO A CLOSED
SUBROUTINE FROM MORE THAN ONE PLACE IN THE MAIN
ROUTINE.
```

(ARNOLD, HILL, NICHOLS, 1978, PP. 253-4)

sentence. Thus there are 5.3 sentences per 100 words. Flesch: Count to the end of the sentence in which the 100th word occurs. Therefore, there are 114 words and six sentences. Enter these figures on the form and complete the math involved.

SYLLABLES - Syllables are counted in the same way for each procedure. An easy way is to count only those syllables over 1 for each word. For example:

1 2 3 4
A sub/rou/tine is a stand/ard se/quence . . .

Complete the counting for the entire passage in the same manner. Your total then is added to the total number of words (100 for Fry; 114 for Flesch, in this example). That gives you the total syllable count.

RECORDING - Fry: Write down the total number of syllables. On the graph plot the total syllables (across) to the number of sentences per 100 words. That will give you the approximate readability level of that passage. Flesch: Write down the number of syllables in the space on the form and complete the mark as noted. Then add x and y and subtract that figure from 206.835. That is the Reading Ease score and translates to grade level on the chart.

The total sample syllable count and results for Flesch and Fry methods follow in Figure 5.

FIGURE 5: SAMPLE TEXT WITH SYLLABLES MARKED

A SUB/ROU/TINE IS A STAND/DARD SE/QUENCE OF IN/STRUC/TIONS DE/SIGNED TO DI/RECT THE COM/PU/TER TO CAR/RY OUT A SPEC/I/FIED OP/ER/A/TION. O/RIG/IN/AL/LY, THESE BA/SIC ROU/TINES RE/CORD/ED IN A COM/PU/TER IN/PUT MED/I/UM WERE IN/CLUD/ED IN THE SOURCE PRO/GRAM AT THE PRO/PER PLACE AND AS/SEM/BLED A/LONG WITH THE REST OF THE PRO/GRAM. IN O/THER WORDS, THE SUB/ROU/TINES HAD TO BE IN/SERT/ED AT EACH POINT THAT THEY WERE NEED/ED IN A ROU/TINE AS SHOWN IN FIG/URE 1/3/-/1. AS A RE/SULT THEY WERE IN/CLUD/ED IN THE MAIN OP/ER/A/TION/AL SE/QUENCE OF THE OB/JECT PRO/GRAM. THESE ARE KNOWN AS OP/EN SUB/ROU/TINES.

A CLOSED SUB/ROU/TINE IS ONE THAT RE/QUIRES PRO/GRAM/MING ON/LY ONCE SINCE IT MAY BE EN/TERED FROM SE/VER/AL POINTS IN A PRO/GRAM.

Note that for numbers and acronyms, each letter (number) counts as a syllable.

The following results were obtained from readability analyses of the preceding sample.

Fry:

100 words

5.3 sentences

164 syllables

11th grade average

Flesch:

114 words

6 sentences

185 syllables

R.E. Score 50.26

11th grade, but at highest end

Exercise A

Following are three examples selected from other sections of the same literature. Practice the procedure, marking syllables and sentence count directly on the samples.

Exercise A Sample 1

On direct access devices, the sequential organization and other methods to be described later usually employ the cylinder concept of recording data. The cyclinder concept makes it possible to utilize direct access storage devices very efficiently. This is achieved by taking advantage of the fact that all access arms on a disk drive move in and out in unison. They are, therefore, all positioned at the same time over the relative track on each recording surface. This allows data to be read or written on the same track of each recording surface without interruption for head movement.

Each track represents a complete circle on the disk recording surface in which data is recorded serially bit by bit.

(Arnold, Hill, Nichols; 1978, p. 156)

Exercise A Sample 2

Broadband Exchange Service. Western Union's Broadband Exchange Service links two subscribers over transmission channels that they select as best suited to their communications needs. By means of a voice-data instrument containing ten push buttons, users can select the broadband width that will furnish optimum, economical data transmission (Figure 11-15). Type of transmission may include voice, facsimile, or digital data as contained in punched cards, punched tape, magnetic tape, and electronic storage devices. Thus, a firm desiring to have a problem solved could utilize the services of a computer at a remote location, possibly in a service center. Such services could be provided on a call-up basis through Broadband Exchange Service connections.

(Arnold, Hill, Nichols; 1978, p. 216)

Exercise A Sample 3

The majority of data entering business data processing systems must be converted to a computer language compatible with the equipment being used. The bulk of this transcribing from human-readable documents to computer language is performed by operators using data entry devices. Most documents are received by data processing in groups or stacks called batches. These batches should have associated with them a control or batch ticket that shows from whom the documents were received, the date, perhaps the time, and a document count (Figure 16-1).

Control totals of quantitative data may also be provided. A control total is the sum of the quantitative data recorded in a common field of each record in a batch or records.

(Arnold, Hill, Nichols; 1978, p. 308)

SAMPLES: HOW SELECTED AND HOW MANY

It is important, if an accurate picture of the literature is to be obtained, that the samples to be analyzed be selected at random. Too many subjective errors would be introduced by merely paging through the book, picking what appears to be representative samples. The easiest way and one that is sufficiently random is entitled a stratified random sampling.

In order to achieve the stratified random sample, it must first be decided how many samples are to be drawn. A useful rule is to select samples from 5% of the pages in the book. Remember, however, that the more samples drawn, the more accurate will be the analysis. That point is demonstrated in the following analyses (See Figure 6) of a medical assisting textbook under consideration in which 3, 6, 10, 15 were drawn. (Average was used in this case to distinguish between results of analyses in which increasing number of samples were drawn.)

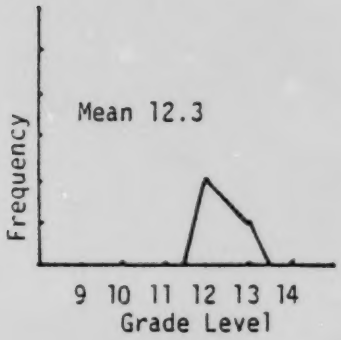
It is recommended that 5% sample or more be drawn for accuracy.

Procedure: Assume a book has 300 pages (not including glossary or index). A 5% sample requires (.05 x 300) 15 samples. To establish the starting page divide the total pages (300) by the total samples required (15). That result is 20. Randomly pick a number from 1-20. This can be done using numbers in a hat. That number is the starting page. Let's assume it is 6. The remainder of the pages are selected by adding 20 to 6, 20 to 26, 20 to 46, etc. until all the samples are drawn.

Figure 6: Sample Graphs of GRL
Frequencies: 3, 6, 10, 15 Samples

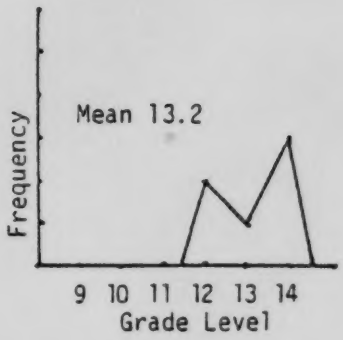
3 Samples

GRL	Freq.
12	2
13	1



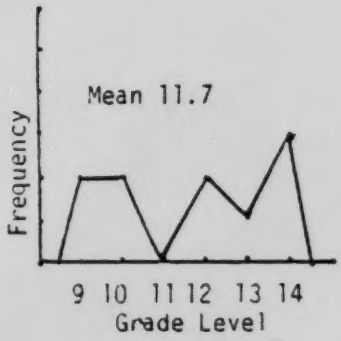
6 Samples

GRL	Freq.
12	2
13	1
14	3



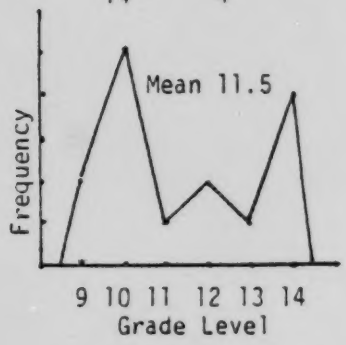
10 Samples

GRL	Freq.
9	2
10	2
12	2
13	1
14	3



15 Samples

GRL	Freq.
9	2
10	5
11	1
12	2
13	1
14	4



Now we know the pages of the book we will use in the analysis. If any of those pages contains no text (some may be pictures or diagrams) move one page at a time forward or backward until text is found. It is also recommended that the sample 100 words be selected alternatively from the beginning (B) and end (E) of the page. Therefore, page 6 would be 6-B (for beginning), page 26-E (for end), page 46-B, etc.

Exercise B

Compute a stratified random sample schedule for the following:

1. Textbook with 350 pages.
2. Textbook with 1000 pages.
3. Textbook with 525 pages.

If the literature you plan to analyze contains less than 200 pages, but more than 25, select 10 samples. For literature of less than 25 pages, but more than 5, select every other page. For literature less than 5 pages, take a sample of every page.

On the following page (See Figure 7) is a form to assist you in recording your findings. It is always a good idea to keep a file of literature analyzed.

Figure 7: Readability Record

Author(s):

Title of Literature:

Publisher:

Publication Data:

Total Number of pages:

Percent of pages sampled:

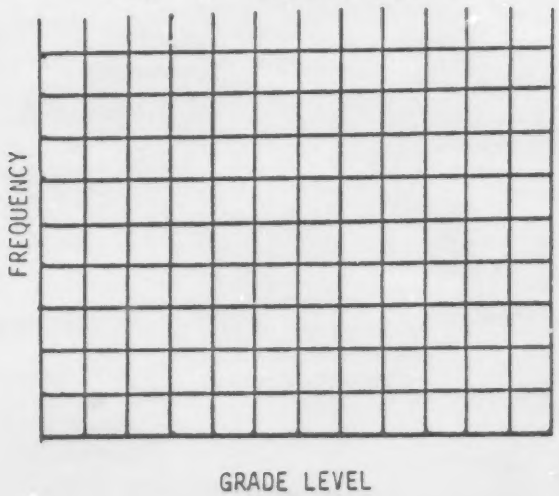
Procedure used:

Page numbers from which samples were taken:

Highest readability:

Lowest readability:

Graph for Plotting Results



(Thornton, Waters & Lee, 1980)

The Problem with Readability Analysis

Earlier it was mentioned that the GRL yield of readability procedures is actually an average (mean). In order for the mean to be an appropriate measure, certain conditions must be met. For example, the range must be closed; there must be a beginning and an end.

Readability yields are not based on a closed range. They begin at an arbitrary point, such as grade one, and end at another arbitrary point, such as grade 16. Reading occurs before grade 1 and after grade 16, but there are no levels to accommodate that reading. So, the mean is, by definition, inappropriate.

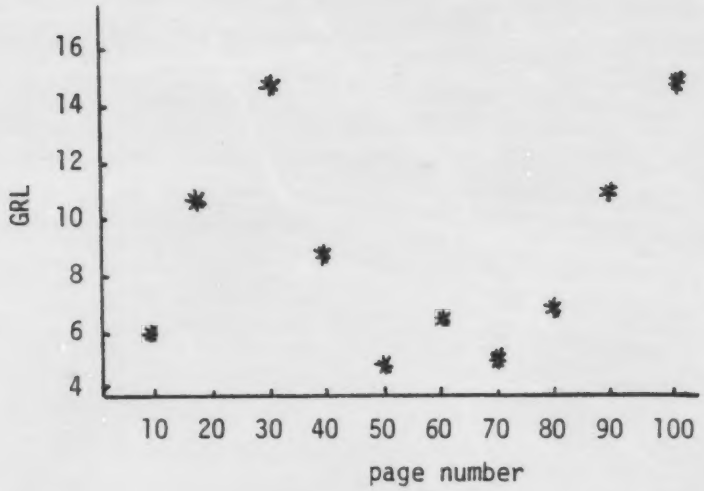
Another problem exists which is more devastating than statistical theory. Readability means assume unimodal distribution and no serious skew. Research attendant to the project (Thornton, 1981) demonstrated that occupational literature is seldom unimodal and, when it is, the distribution is often seriously skewed.

Moving away from statistical talk, what the research found was (1) GRLs were clustered at more than one level, such as at the 10th grade and 14th grade, and (2) when not clustered at more than one level, they contained extreme values which distorted the mean. The result of these conditions is that to report the average grade reading level of a business occupations textbook is nearly useless.

Assume for a moment that a publisher claims a book to be at the 10th grade reading level. What do you now know? Not much! First, readability formulas are accurate to about 1½ grades. Thus a 10th GRL really means 8½ to 11½. Second, the study referred to previously found standard deviations of 2-3 years. So the spread around the mean of 10 is plus or minus 2-3 years. Thus, considering the spread, the information found in a reported 10th GRL, is even more vague. The low end could actually be 5½ and the high end 14½. There is no way to tell.

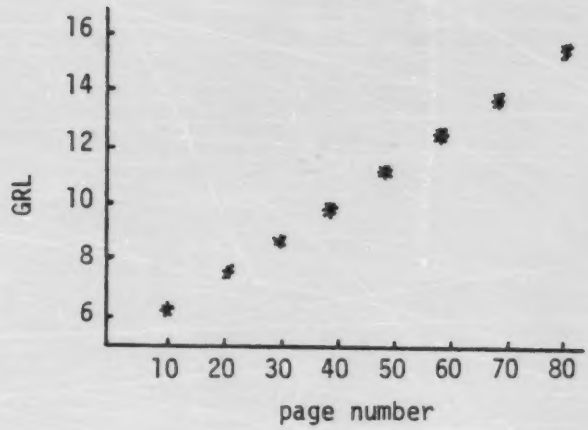
The statistical irregularity can be overcome. Instead of reporting an average GRL, you need to plot the sample GRLs in terms of page numbers in the text analyzed. Actually, this is easier than computing all the statistics mentioned above.

For each sample taken from a textbook plot the results on a graph with the horizontal axis representing page number in the text and the vertical axis being the GRL of that sample. The results would look like the following graph:



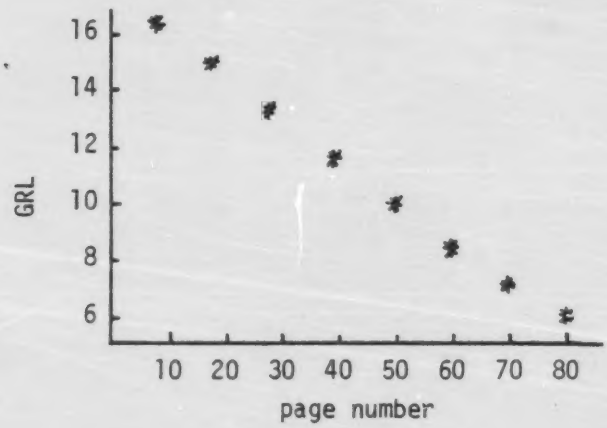
If you know your students have an approximate 8th grade ability, this graph demonstrates that at pages 20, 30, 90 and 100, they will probably have difficulty. The more samples you use, the more specific your information will be. At the problem points, you can intervene with the strategies to be discussed in this guide.

This method of analyzing a text accomplishes something else. Ideally, a textbook should begin at a reasonably low level and proceed to a reasonably high level. So a graph of the results should look like the following graph:



If the graph resulting from your analysis does not show progressive difficulty, the textbook may not be appropriate.

Lets say the graph shows the highest GRL at the beginning and decreasing difficulty thereafter:



Reading deficient students would be faced with the most difficult reading at the first contact with the book. When that happens, many students give up. The book is inappropriate.

It is possible that you have no choice and must use a textbook that is difficult at varying points. In that case, with the graphed reporting procedure, you will know about the difficulty and where it exists you can intervene. The mean GRL simply does not give this information.

Very few graphs will result in perfect lines, such as those shown. You must look for a trend; then you must account for any extremes. In any case, the graphed procedure permits locating potential problems.

SECTION 2
CLOZE PROCEDURE

STUDENT READING ABILITY

Diagnostic reading test scores are often available for students in vocational programs. These scores, normally on file at the home school (in the counselors office at the comprehensive high school), are useful indicators of a student's general reading ability. How well they relate to vocational reading requirements is subject to conjecture. There simply has not been a concerted effort to separate vocational reading skill from general literacy skill. Because of these unknowns it is strongly recommended that you not accept a GRL score as final. Standardized reading test scores are useful indicators, but they should be supplemented with teacher made vocational reading tests.

A useful and highly adaptable reading test is the cloze procedure.

> The cloze procedure is an objective measure of language coorespondence between reader and writer. It consists of a cloze (word) unit, a single occurence of a successful attempt to reproduce accurately a part deleted from a message, by deciding from the context that remains what the missing part should be (Taylor, 1953).

> The cloze procedure differs from vocabulary contextual texts. Rather than choosing omitted words because of definition and purpose, the cloze units are chosen mechanically; every fifth word, for example, occurring at any point in a continuous passage is omitted. The cloze design incorporates control against misrepresenting strength/weakness in content vocabulary as an indication of the test subject's ability/inability to read (Thornton, 1979).

Any piece of literature can be clozed. That includes textbooks, occupational literature, safety messages, codes, medical contraindications, literally anything. The procedure is described below:

1. Select a piece of literature.
2. Leave the first sentence intact.
3. Delete every fifth word.
4. Leave the last sentence intact.
5. Instruct the student to read the entire passage first, then begin filling in the blanks.
6. Instruct the student to be aware when guessing is the rationale for word selection, but to guess when other rationale fails.

Scoring the test is accomplished as follows:

0-39.9% Frustrational level (Student will not be able to read the literature)

40.0-69.9% Instructional level (Student will require intervention to be able to read the literature)

70.0-100.0% Independent level (Student is able to read the literature without intervention)

On the following pages two different cloze tests have been prepared using on-the-job literature. The correct words which have been deleted are listed following each example.

FIGURE 8: MICROCOMPUTER PROCESSORS
CLOZE TEST
USING CONSOLE ODT COMMANDS

6.1 THE HALT MODE

CONSOLE ODT COMMANDS ARE EXECUTED BY THE LSI-11 PROCESSOR ONLY WHEN THE PROCESSOR IS IN THE HALT MODE. WHEN IN THIS MODE, _____ PROCESSOR RESPONDS TO COMMANDS _____ INFORMATION ENTERED VIA THE _____ TERMINAL, AND ALL PROCESSOR _____ IS CONTROLLED BY THE _____ MICROCODE.

NOTE

FOR CONSOLE _____ COMMUNICATION, THE SERIAL LINE _____ MUST BE CONFIGURED FOR _____ BUS ADDRESSES 177560 THROUGH _____. THESE ADDRESSES ARE INCLUDED _____ THE LSI-11 PROCESSOR MICROCODE _____ CANNOT BE CHANGED. IF _____ DEVICE RESPONDS TO THE _____ ADDRESSES, BUS TIMEOUT ERRORS _____ OCCUR AND THE PROCESSOR _____ GO INTO AN INFINITE _____ LOOP. THE ONLY WAY _____

FIGURE 8 (CONTINUED)

GET OUT OF THIS _____ IS TO INITIALIZE THE _____ (MOMENTARILY ASSERT THE _____ H SIGNAL LOW, OR _____ THE POWER OFF AND _____ ON).

THE HALT MODE _____ ENTERED IN ONE OF _____ FOLLOWING WAYS.

- EXECUTING A _____ INSTRUCTION
- PRESSING THE BREAK _____ ON THE CONSOLE TERMINAL (_____ FEATURE CAN BE DISABLED _____ REMOVING A JUMPER ON _____ CONSOLE DEVICE SERIAL LINE _____)
- DURING POWER-UP (POWER UP _____ 1 CONFIGURED ON THE _____ MODULE)
- THE BHALT L _____ SIGNAL IS ASSERTED
- A _____ BUS ERROR (BUS ERROR _____ WITH SP (R6) POINTING _____ NONEXISTENT MEMORY)
- A _____ ERROR (TIMEOUT) DURING MEMORY REFRESH
- A BUS ERROR (TIMEOUT) _____ THE PROCESSOR IS ATTEMPTING _____ INPUT A VECTOR FROM _____ INTERRUPTING DEVICE

FIGURE 8 (CONTINUED)

UPON ENTERING _____ HALT MODE, THE PROCESSOR _____ THE FOLLOWING ASCII NONPRINTING _____ PRINTING CHARACTERS TO THE _____ TERMINAL.

<CR><LF>

NNNNNN<CR><LF>

@

THE NNNNNN IS _____ LOCATION OF THE NEXT _____ TO BE EXECUTED, AND _____ ALWAYS THE CONTENTS OF _____ PC (R7). THE <CR> _____ <LF> ARE CARRIAGE RETURN _____ LINE FEED CODES. THE @ SYMBOL IS DISPLAYED AS THE PROMPT CHARACTER FOR THE OPERATOR; ODT WILL ACCEPT ANY OF THE COMMANDS DESCRIBED IN THIS CHAPTER AT THIS POINT.

MICROCOMPUTER PROCESSORS. MICROCOMPUTER HANDBOOK SERIES. MAYNARD, MASSACHUSETTS: DIGITAL EQUIPMENT CORPORATION, 1978.

FIGURE 8 (CONTINUED)

THE	LOOP	TRAP
AND	SYSTEM	TO
CONSOLE	BDCOK	BUS
RESPONSE	CYCLE	REFRESH
PROCESSOR	THEN	WHEN
ODT	IS	TO
UNIT	THE	AN
CONSOLE	HALT	THE
177566	KEY	OUTPUTS
IN	THIS	AND
AND	BY	CONSOLE
NO	THE	THE
ABOVE	UNIT)	INSTRUCTION
WILL	MODE	IS
WILL	PROCESSOR	THE
MICROCODE	BUS	AND
TO	DOUBLE	AND

MICROCOMPUTER PROCESSORS. MICROCOMPUTER HANDBOOK SERIES. MAYNARD, MASSACHUSETTS: DIGITAL EQUIPMENT CORPORATION, 1978.

FIGURE 9: OUTPUT-FORMAT
SPECIFICATIONS FORM
CLOZE TEST

ADDING RECORDS TO AN INDEXED SEQUENTIAL ORGANIZED FILE (COLUMNS 16-18)

COLUMNS 16-18 MAY BE USED TO SPECIFY THAT AN OUTPUT RECORD IS TO BE ADDED TO AN INDEXED SEQUENTIAL FILE. THIS IS DONE BY _____ THE CHARACTERS ADD IN _____ 16-18, AND ENSURING THAT _____ 66 OF THE RELATED _____ DESCRIPTION SPECIFICATIONS CONTAINS AN _____.

A RECORD CANNOT BE _____ TO A FILE IN _____ SAME PROGRAM IN WHICH _____ FILE IS RETRIEVED OR _____. HOWEVER, ONE FILE CAN _____ ADDED TO AND ANOTHER _____ BE RETRIEVED IN THE _____ PROGRAM.

COLUMNS 16-18 MUST _____ BLANK IF THE OUTPUT _____ IS TO BE USED _____ UPDATE INDEXED SEQUENTIAL FILE.

_____ 1130 RPG THE KEY _____ FOR ANY INDEXED-SEQUENTIAL _____ MUST BEGIN IN

FIGURE 9 (CONTINUED)

POSITION _____ OF EACH RECORD. THIS _____ ALONG WITH THE LENGTH _____ THE KEY FIELD IS _____ ON THE FILE DESCRIPTION _____. IF THE PROGRAMMER DESCRIBES _____ KEY FIELD AS BEING _____ POSITIONS LONG, THE RPG _____ WILL USE THE FIRST _____ POSITIONS OF THE RECORD _____ BE ADDED AS THE _____ KEY FIELD. IN 1130 _____, THE KEY FIELD CAN _____ EITHER ALPHAMERIC OR NUMERIC, _____ IT CANNOT BE PACKED.

_____ CARD AND/OR PRINTER _____ USE THESE COLUMNS AS _____ IN THE FOLLOWING.

STACKER _____ (COLUMN 16)

CAUSES CARD _____ TO BE SELECTED INTO _____ OF A MULTI-STACKER OUTPUT _____ ATTACHED TO THE SYSTEM. _____ IS USED ONLY FOR _____ FILES OR COMBINED FILES. _____ ENTRY IN COLUMN 16 _____ BE ONE OF THE _____:

- NUMBER OF THE STACKER _____ WHICH THE CARDS ARE _____ BE PLACED.

FIGURE 9 (CONTINUED)

- BLANK OR _____, IF THE CARDS ARE _____ BE PLACED IN THE _____ STACKER.

NEW STACKERS MAY _____ SPECIFIED IN SUBSEQUENT OR _____. IF COLUMN 16 IS LEFT BLANK IN AN OR LINE, THE CARD IS DIRECTED TO THE NORMAL STACKER.

IBM SYSTEMS REFERENCE LIBRARY. IBM 1130 RPG LANGUAGE PROGRAM NUMBER 1130-RG-007. ROCHESTER, MINNESOTA, INTERNATIONAL BUSINESS MACHINES, 1972, P. 111.

FIGURE 9 (CONTINUED)

PLACING	FILE	DESCRIBED
COLUMNS	1	SELECT
COLUMN	ENTRY	RECORDS
FILE	OF	STACKERS
A	DESCRIBED	UNIT
ADDED	SPECIFICATIONS	IT
THE	THE	OUTPUT
THAT	5	THE
UPDATED	PROGRAM	MAY
BE	5	FOLLOWING
CAN	TO	INTO
SAME	NEW	TO
BE	RPG	1
RECORD	BE	TO
TO	BUT	NORMAL
IN	FOR	BE
FIELD	SPECIFICATIONS	LINES

IBM SYSTEMS REFERENCE LIBRARY. IBM 1130 RPG LANGUAGE PROGRAM NUMBER 1130-RG-007. ROCHESTER, MINNESOTA, INTERNATIONAL BUSINESS MACHINES, 1972, P. 111.

Exercise A

Cloze the following passage and write out the instructions to the student regarding how they should proceed.

Liability For Forged Checks. A depositor who opens a checking account with a bank must fill out a signature card and leave it on file with the bank. The bank is then assumed to know the depositor's signature and is liable if it pays any checks to which the drawer's signature has been forged. The depositor has the responsibility of notifying the bank of a forgery within a reasonable time after receiving his or her monthly statement and canceled checks. Failure to do so will release the bank from its liability. (Rosenberg & Bonnice, 1981, p. 89)

Exercise A: Answer Sheet

Instructions:

Words List:

The cloze procedure can also be used as a teaching technique. A variety of cloze modifications are useful for vocational teachers.

The changes in the procedure reflect the purpose of the exercise. If, for example, an occupational instructor wishes to highlight relations of principal and agent and be certain that the student reading the literature understands what is being read, the passage can be "clozed," deleting those words which are critical to the comprehension. The following principal/agent passage with "instructional modification" words (to be deleted) underlined illustrates the technique:

SAMPLE: INSTRUCTIONAL MODIFICATION CLOZE

An agent must obey all the reasonable orders and instructions within the scope of the agency contract. He or she may not perform any act that would betray the agent's trust. The agent may not buy his or her own property for the principal, sell the principal's property to himself or herself or compete with the principal in any way without the principal's knowledge and consent.

Another modified cloze teaching technique is the "lexical cloze." Lexical is defined as relating to words of a language. The lexical cloze involves deletion of words according to the kinds of words they are, such as nouns, verbs, adjectives, etc. A later segment of this article develops case grammar modifications utilizing the lexical cloze, establishing applicability for occupational education reading intervention. The example which follows illustrates use of verb deletions in a sales application. The words to be deleted have been underlined:

OVERCOMING SALES RESISTANCE

> The most common types of sales resistance are objections and excuses. As forms of sales resistance, they both provide obstacles that may prevent a salesperson from making a sale. Expert salespeople feel that nothing has really happened in a sales interview until the prospect begins to offer resistance. Objections, especially, should be welcomed, since they indicate that the prospect is becoming involved with the salesperson and the sales demonstration. The prospect who was not interested probably would not raise an objection. (Ernest, 1978, p. 79)

Note that only the verbs involving an action on the part of the student have been marked for deletion. It is the activity that is emphasized in this reading intervention exercise.

When used as teaching technique, the cloze procedure is easily adapted to provide for increasing degree of difficulty. Often vocational students have experienced a history of failures in reading. The pattern is conducive to diminished motivation in an attempt to read. In order to break the pattern and increase the likelihood of a motivated reader, a pattern of reading successes is useful. Literature of any level of readability can

be clozed. Thus, vocational literature at a low readability level can be used for those students who need a success stimulus. In addition, for teaching purposes, synonymous or words close to the correct word can be accepted. The number of clozed words can be decreased instead of following a schedule.

CASE GRAMMAR AND THE CLOZE PROCEDURE

Gibson and Levin (1979) describe Fillmore's theory of case grammar. ". . . which imaginatively combines syntactic and semantic features." The study of meanings (semantics) and the orderly system of words (syntax) combine in Fillmore's Case Concepts (Brown, 1973). The theory of case grammar is easily adapted to teaching techniques using the cloze procedure. The following illustrations demonstrate the usage:

> Agentive (A) - "The typically animate, perceived instigator of action."

(Systems Analysts) define and recommend new systems; estimate costs and benefits; design, implement, and modify systems; and hold overall responsibility for system performance. (Vazsonyi, A.; 1978, p. 25)

> Instrumental (I) - "The inanimate force or object causally involved in the state or action named by the verb."

We believe that the computer offers great benefits at small risk; the challenge is to use it to the best advantage to enrich our lives. (Vazsonyi, A.; 1978, p. 29)

Dative (D) - "The animate being affected by the state or action named by the verb."

Computer operators are the people who see and touch the machine...(Vazsonyi, A.; 1978, p. 21)

Factive (F) - "The object or being resulting from the state or action named by the verb."

Programs written in these languages are compiled by a (machine language) program called the compiler into machine language programs (Vazsonyi, A.; 1978, p. 125)

Locative (L) - "The location or spatial orientation of the state or action named by the verb."

Channels are special-purpose computers, that is, they are input/output processors inserted between the main storage and other peripheral units (Vazsonyi, A.; 1978, p. 273).

Objective (O) - "The semantically most neutral case: anything representable by a noun whose role in the state or action named by the verb depends on the meaning of the verb itself."

A new development to help programmers make their jobs more interesting and more productive is called structured programming.

Benefactive (B) - "A noun deriving benefit of the action of the verb."

The central concept of data base management is to pool data for the many programs and store the data in data bases (Vazsonyi, A.; 1978, p. 330).

Comitative (C) - "In accompaniment."
The best central processing unit is useless without the appropriate input/output, auxiliary devices, and communication system to tie the units of the computer system together (Vazsonyi, A.; 1978, p. 202).

Temporal (T) - "When the verb is accomplished or occurs."
After the connections are made, you can transmit data to the computer or to peripheral devices... (Vazsonyi, A.; 1978, p. 240).

Modified cloze techniques can be used as introductory exercises, included in self-instruction packets, adapted for games, or structured for remedial work. They provide an excellent method of coordinating in-class vocational work and English or remedial reading treatment.

Exercise B

Underline each word in the following passage which could be clozed by Fillmore rules, entering above the word the letter which indicates the rule used.

INFORMING THE CUSTOMER

Regardless of the circumstances under which a new account is opened, the credit manager should write the customer as soon as the decision to approve the account is reached. In any case, the customer should be notified within 30 days from the time of application. The Truth in Lending Act makes it mandatory that a customer be given information regarding credit terms and an

explanation of the cost of credit. Some firms notify customers by mailing them their store credit card(s) with a statement concerning the cost of credit, the payment schedule, and the date on which statements are mailed. Other firms write a letter and enclose pamphlets or bulletins that will help customers understand their responsibilities and their rights. Many firms purchase pamphlets describing special provisions of the Truth in Lending Act from their state or national retail merchants' association. They have printed forms that describe the terms and conditions of the various types of credit accounts they offer. An example is shown in Figure 5-5. Since letters pertaining to credit are so important, they are considered in detail in Chapter 7. (Crawford & Lynch, 1979, pp. 68-69)

SECTION 3
INFORMAL ASSESSMENT

INFORMAL ASSESSMENT

Prior to the instruction of reading skills with the occupational literature, it is important to know your students' current reading performance. A standardized test is useful as a general screening device and yields composite scores in major skill areas -- e.g. vocabulary and comprehension. Another instrument is needed, however, to assess specific skills within the major skill areas -- e.g. contextual analysis, main idea, cause-effect relationship. The development and use of an informal assessment can meet this need.

Procedure

A. The first step in the development of an informal assessment is the establishing of a hierarchy of critical reading skills in which vocational students should show competence. The skills presented, for example, in this text have been determined as important for effective reading in the vocational materials. Also, the needs of your specific student population must be considered.

B. After determining the skills to be measured, then an order or matrix within each major skill area must be developed. The more reasonable order is proceeding from easy to more difficult.

C. Then the informal measure is designed based on the criteria in items A and B. Extractions from materials (textbook and manufacturer's) to be used in the occupational program

should be used in constructing the questions. Therefore, the questions require practical application of skills with materials students need to read and understand in class. The assessment becomes "tailor-made" to your course.

D. It is helpful to design pre and post assessments with similar levels of difficulty, and which measure the same skills in the same order -- two instruments that are as parallel as possible. These can be compared for program effectiveness and for evaluation of improvement of students' reading skills in your occupational area.

Purpose

The use of the informal reading skills assessment can accomplish three purposes for the vocational teacher:

A. It can be utilized as an identification procedure. After students have taken the assessment, you can recognize more clearly those students whose reading skills are noticeably inadequate. This measure helps you to identify the disadvantaged learner. If a student performs poorly on much of the assessment, he/she will probably have difficulty with your assigned vocational reading materials.

B. It can be utilized as a diagnostic procedure to determine which reading skills will require special attention in your instruction. After the assessment is scored, you

will be able to select those questions which were more frequently missed and identify the specific skills in which students are showing most difficulty.

C. It can be utilized as an evaluation procedure with vocational students growth (both group and individual) in reading skill performance. This can best be accomplished by using pre and post measures of the assessment. This pre and post testing can be used with a total skills program or can be done with skill segments. The results will be useful to the teacher for evaluating student progress and program effectiveness. The results can also be used as supportive data for reporting course or program success.

Administration

The informal assessment can be administered once or parallel tests can be given for a pre and post testing situation. A pretest is given before instruction and student practice, followed by a parallel posttest. As mentioned previously, the pre and post measures allow for comparison, and student progress and program effectiveness can be more completely evaluated. A single administration can also be beneficial as discussed in the "purpose" section. The results can be used for identification of disadvantaged learners, for identification of skills to be emphasized in instruction, and for information regarding students' reading performance.

Scoring and Reporting

Since the assessments are designed specifically for your program and they are not standardized, the scores can be reported in percentages (number correct divided by number possible). Each item should be assigned a point value with the total equaling 100. The results are best utilized when this is done for each of the major areas -- vocabulary, comprehension, and study skills.

Students should be given their scores so they recognize their own reading skill performance. A short reporting form with raw score and percentage provides good record for the student; individual skills tested with a raw score breakdown could be included to provide more specific information.

If you utilize a pre and post testing program, results can be reported in various ways. Students can be given both sets of scores for comparison and evaluation of growth. Data can be recorded to show program performance by: (1) listing all students raw and percentage pre and post scores together in chart form; (2) determining "percentage improvement" by students and recording in table form. An example of item 2 could be:

Comprehension - Test 2 (This can be done for each major area.)

1) 33 possible items

2) Approximate time: 30 minutes

3) Content: Paragraph subject, supporting ideas, main idea, graphics

4) Results: 113 of 129 students showed improvement

Amount of percentage gained from pre to post score	Number of students
1 - 10%	36
11 - 20%	35
21 - 30%	20
31 - 40%	13
41 - 50%	7
50+	2

Scoring the assessments and reporting the results is helpful in many ways. Students can visually see reading performance. You, as vocational teacher, can determine which reading skills need emphasis. Plus, student and program performance can be more clearly seen.

Assessments

Following are three informal assessments, one for each of the major skill areas. Excerpts of occupational literature from varied trades have been utilized. It has been designed so that it can be given to all vocational students, even with the varied occupational material. Critical reading skills for vocational literature have been determined and they provide the structure for the three assessments.

The informal assessments (vocabulary, comprehension, study skills), can be administered as they are, or they can be used as models for your own construction of informal assessments. Sample answer sheets are also included. Plus, suggested "question-weight" is given, according to difficulty of task. This is a guideline; you may devise your own point system.

ASSESSMENT ONE -- VOCABULARY

This activity will help you to measure your present vocabulary performance. Answer as accurately as possible. Please reocrd all responses on the provided answer sheet.

A. Formal Definitions (2 points each definition)

Directions: The following exercise measures your ability to determine the meaning of a word by understanding the formal definition given. Write a definition for each underlined words or phrase

1.) A vocation is a job for which a person is specially trained. (Ray & Lewis, 1980, 31)

2.) Face-to-face listening, listening done as part of a two-person conversation, and listening done as a member of a small group are all referred to as small-group listening. (Rowe & Jimerson 1971, 19)

3.) Since the goal at this stage of construction is to enclose the structure and make the roof watertight, only those partitions that support the ceiling and/or roof (bearing partitions) are usually installed. (Wagner, 1979, 142)

B. Synonyms (1 point for each answer - 7 points total)

This section will measure your ability to determine meaning of a word by locating synonyms -- one word or a small phrase which has a similar meaning and which serves to explain. Write that single word or phrase which is a synonym for the underlined word(s).

1.) One must understand the system to accurately diagnose (identify) mechanical difficulties. (Althouse, Turnquist & Bracciano, 1975, 99)

2.) Carbohydrates are classified as monosaccharides, or simple sugars, when they contain one basic sugar unit ($C_6 H_{12} O_6$). (Morgan, 1974, 49)

3.) The surface may spall (chip or crumble away) if subjected to moisture and freezing. (Wass & Gordon, 1981, 134)

4.) Pick out the terms and the appropriate synonyms in this paragraph:

When these lines of force encounter a longitudinal (lengthwise) crack, they lean through and become points of surface attraction for the magnetic powder dusted on the surface. A transverse, or crosswise crack, would not show because the lines of force would be parallel with the crack. (Sacks, 1976, 361)

C. Inferential Clues (3 points each definition)

This section will require you to use clues from the surrounding context to determine the meaning of an unfamiliar term. Write a definition for each underlined word by using the clues within the paragraph.

1.) Early Ambulation. It is common practice to get the patient out of bed hours after surgery, instead of keeping him in bed for prolonged periods, which adds to his discomfort and delays his recovery . . . You should remain with the patient the first few times that he is out of bed. Assist him to dangle his feet at the side of the bed for a few minutes so that his circulatory system can adjust to his change of position. When he no longer feels dizzy or light-headed, assist him to stand, take a few steps, and sit in a chair. In the postoperative orders, the patient's doctor will specify when the patient is to be ambulated, how often, for how long a period of time, and with what, if any, limitation. (Wood & Rambo, 1977, 493)

2.) In planning interior display it is necessary to take into consideration a whole interior and not just an individual display. In order to obtain a harmonizing effect from displays, the interior planning should include decorations, layout, and merchandise displays. Decorations include the lights, fixtures, walls, ceiling and floors. The layout involves the placement of the tables, showcases, racks, and other equipment. The displays involve the actual placing of merchandise on the counters, the floor, the shelves, and in showcases. (Everard & Shilt, 1979, 207)

3.) Before repainting, the probable cause of the trouble should be ascertained. If it is due to springtime blistering on localized areas on the house in the colder northern states, a more effective vapor barrier is needed. This can be obtained by painting the indoor side of the exterior walls. Two coats of

aluminum paint plus two coats of decorative paint are best for sand-finish plaster. On smooth plaster, a primer-sealer and at least one coat of semigloss paint make a good barrier. Shutting off humidifiers will also help. (U.S. Dept. of Agriculture, 1973, 13)

4.) For this paragraph, define the underlined word, and list the words or phrases (clues) which helped you to understand the meaning of that word.

Sedation is used for the dental patient to relieve apprehension and fear. The techniques and drugs used do not render the patient unconscious, and their protective reflexes remain intact. The patients, at proper levels of administration, will respond to commands by the dentist and assistant and are able to cough, swallow, breathe, and maintain all physiologic functions at reduced levels. (Richardson & Barton, 1977, 453)

D. Illustrations (3 points each definition)

The next questions will measure your ability to define words through the use of drawings and photographs.

1.) Look at the drawing carefully. What is the meaning of gesticulating?

The gesticulating speaker communicates her own nervousness.

(Rowe & Jimerson, 1971, 84)

2.) Use the drawing and the paragraph from a textbook on machining to determine what <u>parallels</u> are.

Parallels, Figure 7-36, can be made from standard steel shapes or from special steel that is heat treated. The heat treated steel is then ground to size. Parallels are helpful for raising work in the vise so drilling can be better observed. Parallels must be located so the drill does not come in contact with them when the drill breaks through.

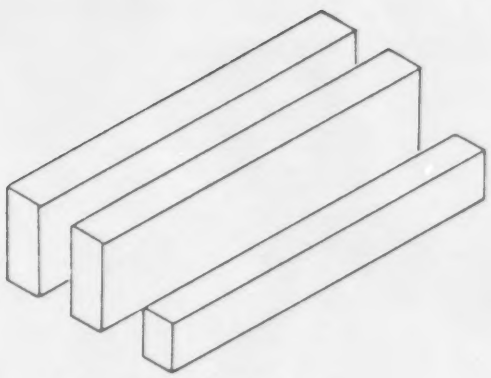
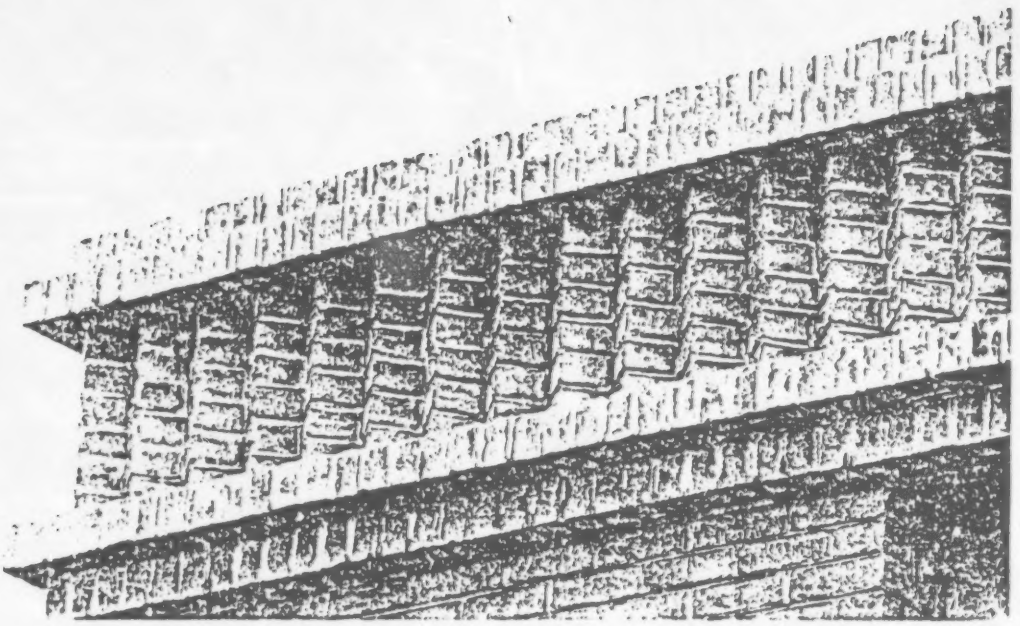


Fig. 7-36. Steel parallels.

(Walker, 1977, 104)

3.) Look at the following photograph carefully, What is brick corbelling?



(Kreh, 1976, 210)

E. Content Vocabulary (4 points each paragraph)

The following section will require you to recognize content vocabulary words. Read each paragraph and list on your answer sheet those words or phrases specific to the given occupation (A) that you would need to know to understand the reading material, and (B) that are common to that occupation.

1.) Occupation: Food Preparation

Originating in many different parts of the world, spices, herbs, and other flavoring agents are parts of plants, flowers, or complete agricultural products, used to add zest to a dish. Although they often were used in the past to mask a taste generated by spoilage or decay of a food, they are presently used (in most cases) to enhance the flavor of a culinary work or to give unusual stimulation to a traditional dish. (Morgan, 1974, 47)

2.) Occupation: Welding

The single-bevel T-joint is able to withstand more severe loads than the square T-joint. It can be used on plate thicknesses ranging from 3/8 to 5/8 inch. Plate of greater thickness can be welded with the submerged arc process. Cost of preparation is greater than for the square T-joint, and fitup is likely to take longer. Electrode costs are less. (Sacks, 1976, 123)

3.) Occupation: Business/Management Tactics

A lockout is a temporary work stoppage by an employer in an attempt to win a dispute with the employees. In a sense, a lockout is a strike by the employer against the employees because management "locks the gates" and refuses to let workers enter the business. The lockout cannot be used as a device to discourage employees from joining or forming a union, although it was used extensively for that purpose prior to the passage of certain laws. Today employers seldom close their businesses in order to pressure employees to negotiate even though they have the right to do so. (Everard & Shilt, 1979, 453)

*This assessment has been assigned 49 points. To facilitate scoring, it is suggested to award the extra point to each student or to devise a one-point item.

ASSESSMENT ONE -- VOCABULARY

SAMPLE ANSWER SHEET

Name _____ Date _____

A. Formal Definitions

1.) _____

_____

2.) _____

_____

3.) _____

_____

B. Synonyms

1.) _____

2.) _____

3.) _____

4.) Term _____ Synonym _____

5.) Term _____ Synonym _____

C. Inferential Clues

1.) What is early ambulation? _____

_____

_____

2.) What is interior display? _____

_____

_____

3.) A. What does ascertained mean? _____

_____

B. What is vapor barrier? _____

_____

_____

4.) A. What is sedation? _____

_____

_____

B. List the clues: _____

_____

_____

D. Illustrations

1.) Gesticulating: _____

_____

_____

2.) Parallels: _____

_____

_____

3.) Brick Corbelling: _____

_____

_____

E. Content Vocabulary (You may list in 2 columns.)

1.) Food Preparation:

2.) Welding:

3.) Business/Management Tactics:

VOCABULARY ASSESSMENT

SUGGESTED - APPROXIMATE ANSWERS

A. Formal Definitions (Answers should be close to these.)

1.) vocation - job for which a person is specially trained.

2.) small-group listening - includes face-to-face listening, listening in a two-person conversation, and listening in a small group.

3.) bearing partitions - those partitions that support the ceiling and/or roof.

B. Synonyms (Answers should be exact.)

1.) (diagnose) - identify

2.) (monosaccharides) - simple sugars

3.) (spall) - chip or crumble

4.) A. longitudinal - lengthwise
B. transverse - crosswise

C. Inferential Clues (Answers will vary but same main point should be included.)

1.) early ambulation - having the patient out of bed and walking a few hours after surgery.

2.) interior display - includes planning for the inside of an entire space, and the decorations, layout and merchandise displays should be coordinated.

3.) A. ascertained - determined or understood
B. vapor barrier - that process which keeps out the moisture

4.) A. sedation - techniques and drugs used by dentists to calm a patient and to relieve pain that are safe and reasonable for patient.
B. Clues: - to relieve apprehension and fear
- do not render patients unconscious
- protective reflexes remain in tact
- patients will respond to commands
- patient can maintain physiologic functions at reduced levels

D. Illustrations (Answers will vary but main points should be similar.)

1.) gesticulating - gesturing or using the hands and body to communicate ideas to your audience.

2.) parallels - heat-treated steel that is ground into rectangular bars of various sizes, according to need., They are useful during drilling for raising work in the vise.

3.) brick corbelling - bricks which form a shelf or ledge that are arranged in tight rows going across with corners exposed. Two rows of brick border the top and bottom of this arrangement which appears to be a strong construction.

E. Content Vocabulary (Answers may vary slightly.)

1.) Food Preparation:

spices
herbs
flavoring agents
agricultural products
spoilage or decay
enhance the flavor
culinary work
traditional dish

2.) Welding

single-bevel T-joint
square T-joint
plate thicknesses
submerged arc process
fitup
electrode costs

3.) Business/Management Tactics:

lockout
temporary work stoppage
employer, employee
strike
management "locks the gates"
union
negotiate
pressure

ASSESSMENT TWO -- COMPREHENSION

A. Paragraph Subject (2 points each)

Directions: This section will measure your ability to recognize the subject of the paragraph -- what it is about. For each paragraph record its subject in a phrase of approximately 3 - 7 words. Place all answers on the answer sheet.

1.) Many plastics products require thin walls, stiffness and low cost. A blow molded gallon milk bottle requires a minimum of material and is easier to handle when made from a stiff resin like high density polyethylene. On the other hand, flexibility is of value in designing squeeze bottles for hair shampoo or plastic tubing which must be coiled. (Baird, 1976, 77)

2.) The paper stencil method of screen printing is the least expensive and the simplest to prepare. The stencil can be easily cut from paper and attached to the screen. Paper used for making stencils must be tough (but not too fibrous) to prevent tearing and rough edges. If water-base ink will be used for printing, the paper stencil should be made of waterproof paper. (Broekhuizen, 1979, 182)

3.) A party who fails, after a reasonable time has passed, to perform contractual obligations has breached the contract. The breach occurs whether the party has completely or partially failed to perform. In the case of complete failure, the contract is terminated. Partial failure to perform may require the injured party to pay for the work that has already been done. (Rosenberg & Bonnice 1976, 57)

4.) The Code requirements for the installation and construction of recessed fixtures are given in Section 410-64 through 410-72. Of particular importance are the Code restrictions on conductor temperature ratings, fixture clearances from combustible materials, and maximum lamp wattages. Recessed fixtures generate a great deal of heat within the enclosure. Thus, these fixtures are a fire hazard if they are not wired and installed properly. (Mullin, 1981, 70)

B. Paragraph Main Idea (4 points each)

Directions: This series of paragraphs will require you to write a statement of main idea -- including the most important information in the paragraph. Please write in your own words. Record your statements of main idea on the answer sheet.

1.) Many people in the United States get a large part of their calories from sugar, fats, oils, and alcohol. Since these foods are high in calories and have few, if any, nutrients, they are known as empty calories. When people eat too many empty calories, they may not get enough of the nutrients the body needs daily. Eventually, they may develop poor nutrition and health problems. (Kowtaluk, 1977, 63)

2.) After the work has been "roughed down," it must be finish turned to attain the proper size and surface finish required. Generally, only one finish cut is taken since the diameter should be only .030 to .050 oversize after the rough cut. The lathe speed is usually higher than that used for rough turning and a finer feed is used. A sharp toolbit with a slight radius on the point is desirable for finish turning. If the roughing toolbit was used to turn only a few pieces, the cutting edge may still be keen and therefore can be used for the finish cut. (Krar, 1971, 80)

3.) By program implementation, we mean the task of actually converting a problem solution, existing perhaps in the form of a flowchart, into a computer program. This task involves a number of clearly identifiable steps. The first of these is coding; in other words, actually writing the instructions. It's a rare programmer who can write error-free code; thus a second step in this process is program debug, which simply means removing the errors (or bugs) from the program. The final step is program testing. In this step, the program is used to process realistic, representative data, and the results are compared with expected results. These three steps overlap a great deal, with errors frequently being detected during testing and removed (debugged) by recoding portions of the program. (David, 1978, 218)

4.) The seven convenience receptacles are located around the perimeter of the living room. These receptacles are the split-circuit type. That is, the bottom portion of each receptacle is switch-controlled and the top portion of each is hot at all times. These receptacles are controlled by two three-way switches. One switch is located near the front hall and the other is located next to the door leading to the kitchen. (Mullin, 1981, 99)

5.) The uninformed body mechanic will usually seize a rubber mallet or hammer and start the job by striking at the center of the damaged area. While this will force a large area of the sheet metal back into approximately its original position, actually additional damage is being created. In fact this roughing out procedure has not corrected any of the basic damage. That is still there and in most cases some marks of the roughing hammer or mallet plus some stretched metal have been added to the original damage. Extra time, therefore, is required to restore the panel. (Toboldt, 1979, 23)

C. Paragraph Supporting Ideas (3 points each)

Directions: This section will measure your ability to recognize ideas which lend support to or further explain the main idea of a paragraph.

1.) Reread the 5 paragraphs given in the main idea section (item B) and determine at least three supporting ideas for each paragraph. Use your constructed main idea for each paragraph to help you decide on the supporting ideas; be sure that each supporting idea relates to that main idea.

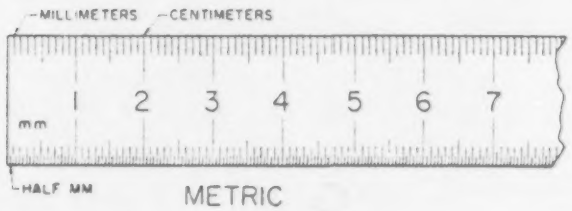
2.) List the supporting ideas in phrases (not a complete sentence) on the answer sheet.

D. Illustrations (3 points each)

Directions: In this section you will be required to understand the meaning presented in three different types of illustrations. Write a brief explanation for the first two items; describe what you see and and what the illustration is trying to show you, the reader. What is the significance of each illustration? For the third item, label as directed.

1.) Describe the meaning of this illustration. What is it telling you, the reader?

FRACTIONAL INCH

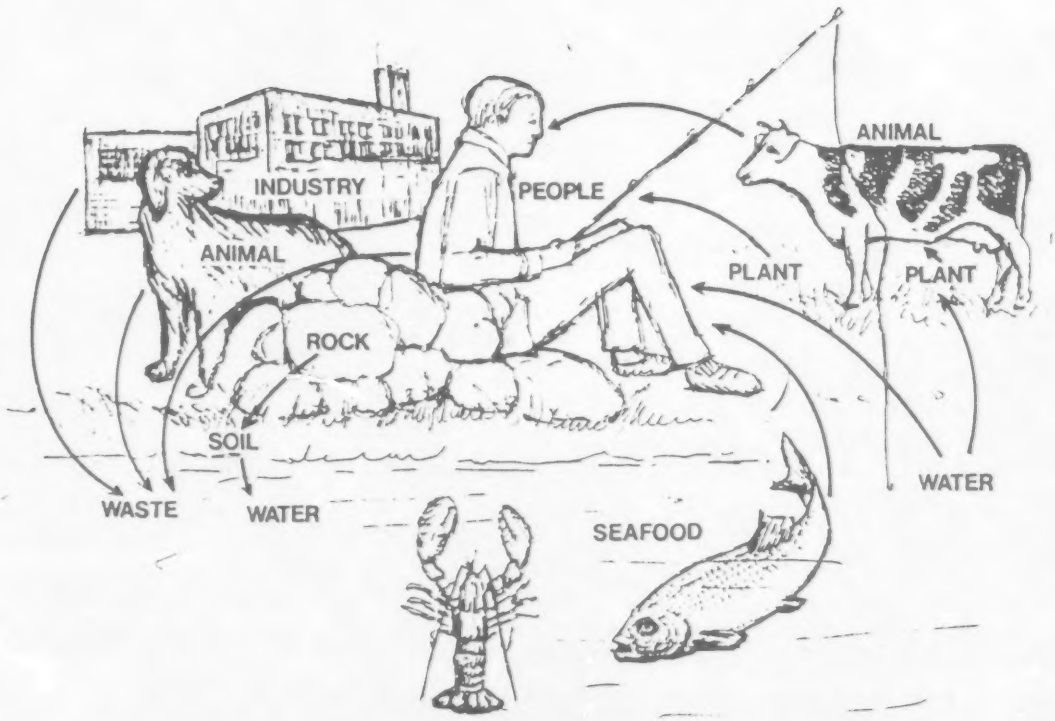


METRIC

DECIMAL INCH

(Walker, 1976, 39)

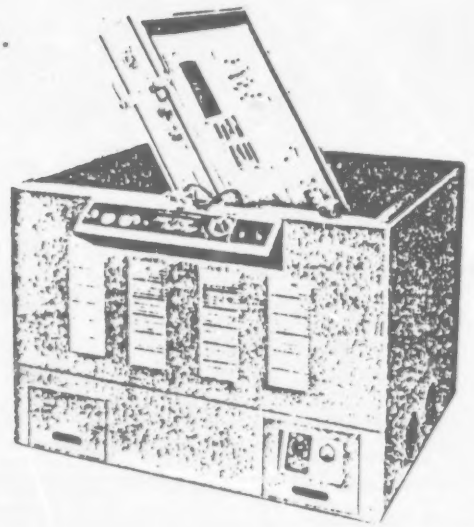
2.) Describe the process in this illustration. What is this cycle showing you?



(Kowtaluk, 1977, 32)

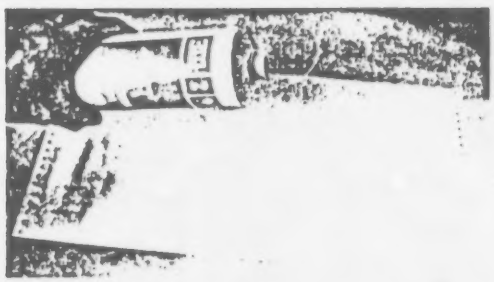
3.) The following illustration contains sequential pictures, which represent a process. Look at the pictures and then label accurately the text paragraph which is included on the answer sheet. Place the letter of each picture next to the appropriate sentence or sentences in the text paragraph which describes that picture.

A.

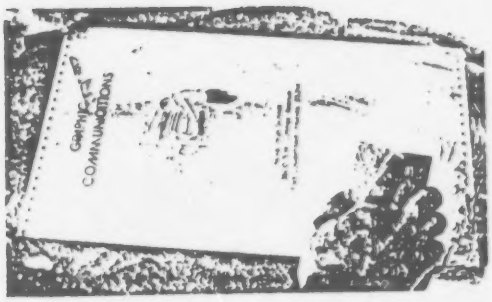


B.

C.

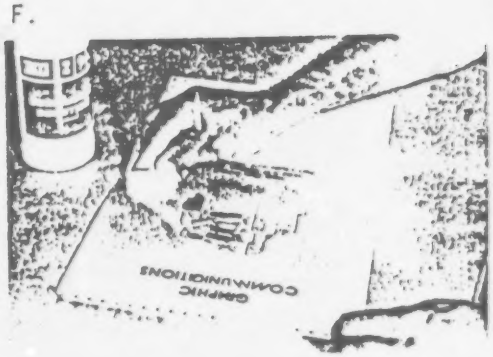


D.



E.

F.



(Broekhuizen, 1979, 252)

* Suggested point evaluations have been given for each section of this assessment. Points assigned to each answer will be determined by overall accurac f answer. Other point systems may be assigned.

ASSESSMENT TWO -- COMPREHENSION

SAMPLE ANSWER SHEET

Name _____ Date _____

A. Paragraph Subject (Write a phrase)

1.)_____

2.)_____

3.)_____

4.)_____

B. Paragraph Main Idea (Write a sentence)

1.)_____

_____

_____

2.)_____

_____

_____

3.)_____

_____

_____

4.)_____

_____

_____

5.)_____

_____

_____

C. Paragraph Supporting Ideas (Write phrases)

1.)_____

_____

_____

_____

_____

2.)_____

_____

_____

_____

_____

3.)_____

_____

_____

_____

_____

4.)_____

_____

_____

_____

_____

5.)_____

_____

_____

_____

_____

D. Illustrations (Write a brief paragraph or label given paragraph.)

1.)

2.)

3.) After the flat has been prepared, a metal offset plate may be made. The platemaker is used for burning the plate. Open the vacuum frame and clean both sides of the glass to remove any dust or fingerprints. Place the metal plate in the vaccum frame with the presensitized side up.

Place the flat on top of the plate in the vacuum frame with the face up, or in a readable position. Align the gripper margin end of the masking sheet with one end of the plate. Close the vacuum frame, turn on the vacuum pump, and flip frame over so that the flat is now between the plate and the light source. Set the timer and expose the plate for desired length of time.

After exposure, the plate is rubbed up or developed to bring the image into view. Turn off the vacuum and remove the plate, placing it on a flat work surface. Pour a small puddle of process gum in the center of the plate and wipe it over the entire plate surface.

While the process gum is still wet, pour a puddle of developer on the plate. Use a sponge to spread developer over the entire plate surface. For best results, use very light pressure and long, even wiping strokes. The image will begin to appear as the plate is rubbed with the developer. Repeat the rub-up procedure for the second side of the plate. Apply running water to both sides of the plate to remove all traces of the developer. A cotton pad may be used to lightly wipe the plate surface during the rinsing operation.

Allow the plate to dry. Gum arabic is now used to coat the surface of the plate to prevent oxidation of the non-image areas. Gum arabic may be applied with a cotton pad to the entire plate surface.

COMPREHENSION ASSESSMENT

SUGGESTED - APPROXIMATE ANSWERS

A. Paragraph Subject (Answers should be concise -- not too general and not too specific.)

1.) Requirements for plastic products

2.) Paper stencil method of screen products

3.) Breach of contract: definition and consequences

4.) Code Requirements for installing recessed fixtures

B. Paragraph Main Idea (Answers will vary but these main points should be included.)

1.) Many Americans receive a large portion of their calories from "empty-calorie" foods and consequently may not get adequate daily nutrients.

2.) For proper size and surface finish, the roughed down work must be finish turned, generally with only one finish cut, done with a higher lathe speed and finer feed than used for rough turning.

3.) Program implementation, or the process of changing a problem solution into a computer program, includes the definite steps of coding, debugging, and testing which tend to overlap.

4.) The outer walls of the living room contain seven convenience receptacles of the split-circuit type, which are controlled by two three-way switches.

5.) The body mechanic who lacks knowledge about repair may strike the center of a damaged area on an automobile with a hammer and cause more damage and more time for repair.

C. Paragraph Supporting Ideas (Answers will vary but same ideas should be included.)

1.) A. foods high in calories, low in nutrition -- empty calories;
B. sugar, fats, oils, and alcohol -- empty calories foods;
C. people may develop poor nutrition and health problems.

2.) A. one finish cut, diameter should be only .030 to .050 oversize after the rough cut;
B. finish turning, sharp toolbit with a slight radius on the point is desirable for finish turning;
C. if roughing toolbit used to turn only a few pieces, cutting edge may be keen and usable for finish cut.

3.) A. problem solution existing perhaps in form of flowchart;
B. coding, actually writing the instruction;
C. program debug, removing the errors;
D. a rare programmer who can write error-free code;
E. program testing, program used for processing representative data;
F. testing, results are compared with expected results;
G. steps, overlap, errors found during testing, then removed by recording.

4.) A. split circuit, bottom portion switch-controlled and top portion hot always;
B. two 3-way switches, one near front hall and other next to door to kitchen.

5.) A. striking center, will force a large area of the sheet metal back into original position;
B. basic damage not corrected;
C. some marks of roughing hammer or mallet may be left;
D. stretched metal may have been added to original damage.

D. Illustrations (Answers will vary; main points should be included.)

1.) This illustration includes a comparison of three rules, each with a different type of measurement. The metric rule is compared to the fractional inch and the decimal inch rules.

2.) Chemical wastes from industry and other wastes from man and animal travel a continuous cycle from water and soil to plants, animals, and people and back into water and soil. Chemicals get into the food chain, either through soil and plants to animals or through the water to fish and animals.

3.) A - Open the vacuum frame . . . to . . . side up.
B - Place the flat on top . . . to . . . end of the plate.
C - Pour a small puddle of process gum . . . to . . . entire plate surface.
D - Use a sponge to spread developer . . . to . . . as the plate is rubbed with the developer.
E - A cotton pad may be used . . . to . . . during the rinising operation.
F - Gum arabic is used to coat . . . to . . . cotton pad to the entire plate surface.

ASSESSMENT THREE -- STUDY/READING SKILLS

To Teachers:

I. This assessment will determine more specific comprehension performance in "study situations." For this, you will use your own selected occupational materials which you will assign to your students for reading.

II. The following procedure is suggested for this informal assessment:

A.) Choose a two-page selection from your occupational text which is close to the beginning of a new chapter.

B.) Have students preview the selection (2-3 minutes). Do not explain guidelines to them; just assign the task.

C.) At the end of preview, ask students to write a preview recitation from memory -- any information they can remember from the preview (3-5 minutes). Encourage them to group ideas together for meaning, as well as recording individual names, words, numbers, etc.

D.) Then, ask students to study-read the selection 7-10 minutes). They can take notes if they choose to do so. Tell them they will be responsible for the understanding of the material.

E.) Have students (without selection and without using notes) answer ten multiple choice or short questions which you will need to devise with your own material (7-10 minutes). [In making the questions, vary difficulty and task, with some factual, others definition, main idea, and drawing conclusions.]

F.) For the last activity, assign students to write a summary of the material read -- without notes or selection (7-10 minutes).

III. Additional Guidelines:

A.) Assign a reasonable time limit for each activity. The preview time is the only one which should be strictly adhered to. Try not to "rush" students, so that they feel frustrated with this assessment.

B.) All writing for this is to be done from memory. Students may use own paper and should label selections carefully.

C.) This informal assessment can be given in a pre and post situation. The procedure should remain constant with the pre and the post measures, and the selections should be similar in difficulty of concept load and readability level. The first measure (pre) should be administered, followed by instruction of and student practice with study/ reading skills (sections 8 & 9 in this manual), and concluded with second measure (post). The criteria for grading both the pre and the post should be parallel.

D.) The assessment can be administered one time only, either before instruction to see what needs to be emphasized, or after instruction of study/ reading skills to evaluate student performance in that area.

E.) Points can also be assigned in this assessment. There are three written products to evaluate and a composite score of 25 points can be assigned (5-preview recitation, 10-comprehension questions, 10-summary). Using 25 total points eases the conversion to percentage scores for data recording.

F.) This assessment can be added to, to fit your needs. The tasks involved of reading and writing from memory, previewing, summarizing, etc. are important study/reading skills for the vocational student.

SECTION 4
INTRODUCTION TO THE GUIDE

READING THE VOCATIONAL TEXT/SKILL PRESENTATION

Purpose:

This vocational guide is designed to offer ideas and procedures for integrating reading skills with the occupational content of business related careers. To effectively read and understand the materials in this field, students need reading skill instruction and practice. There are two important concepts in teaching reading skills -- the introduction of technique and the opportunity for practice. As teachers, you can help provide this for your students by using the following suggested techniques and practice activities in your classroom.

Organization:

The following sections present important content reading skills and suggested instructional procedures. Only those skills particularly relevant to vocational texts have been included. And, each skill has been divided into segments requiring approximately 5-10 minutes of class time for introduction and for practice. Actually, this will not be additional work for you and your students. Since you will be using the content information to be learned, it will serve as a different method for learning it. Any suggested activities can be utilized as homework with the text assignments you would normally require at that point in your course. Since students must give careful attention to their text in order to complete the reading skill assignments, they will have the opportunity to "work with" the content material and to learn and understand it better.

Each section introduces a skill and uses a variety of vocational examples to clarify it. The exercises provide opportunity for the application of the skill and the mastering of it. The explanations and exercises are given to you as vocational teachers, and can be adapted and used with your students. Some changes may be necessary to fit your particular needs.

Following the individual skill discussions is a section called "Suggested Reinforcement Activities/Textbook." Here, each skill can be applied to your course textbook and supplementary reading materials. With this, you will locate skill practice. This second application accomplishes three purposes: 1) It allows you to locate examples and sample exercises that you can use in your classroom, which will reduce preparation; 2) It enables you to arrange skill instruction suitable to your text; and 3) It gives you an additional practice opportunity with the same materials your students will use.

At the end of each section are additional suggestions for teaching the new skills.

SECTION

DEVELOPING VOCABULARY SKILLS

DEVELOPING VOCABULARY SKILLS

To better understand the field of business careers the student must know the specialized technical vocabulary. Without understanding of "business-related" words, the student cannot gain enough information from the reading material. Since complete knowledge of vocabulary and rapid comprehension of this content is critically important, most textbook authors have purposely provided definitions and other aids (varied type, contextual clues, etc.). Five of these aids are discussed on the following pages: formal definition, synonyms, inferential clues, illustrations, and glossaries.

Contextual Analysis

A practical way to build technical vocabulary is through contextual analysis -- learning the meaning of a word through its use in a sentence. Usually the author will define a technical term the first time it is used. From then on the student must remember it and recognize it as it is used in context. "Clues" within the sentence become important in learning and in remembering the necessary occupational vocabulary; they are the bits of information which help you arrive at the meaning. The following discussion of contextual analysis includes formal definition, synonyms and inferential clues.

A. Formal Definitions

Often an author will define an important technical term is the sentence that introduces it.

Example: An open corporation (also called a public corporation) is one that offers its shares of stock for public sale. (Everard & Shilt, 1979, 104)

Term	Definition
open corporation	offers its shares of stock for public sale

Clue words tell the reader that a definition is included in the sentence. The clue words in this example are "is one that." Other clue words which the author might use are: is, means, are, is referred to, is called, and is defined as. Also, dashes (-) may be used to set off definitions.

Exercise A: Practice this vocabulary skill by locating the technical term and its definition in each of the following items. Remember that a technical term is a word specific to the occupation and it may include one word or several.

1. Interest is the charge for the use of borrowed money, expressed as a percent of the amount of the loan. (Rosenberg & Bonnice, 1976, 37)

Term	Definition
_____	_____
	_____

2. Human relations refers to how well people get along together. (Everard & Shilt, 1979, 390)

Term	Definition
_____	_____
	_____

3. All of a salesperson's product knowledge - facts about a product - must be converted into consumer benefits - things that a customer is vitally interested in. (Ernest, 1978, p. 44)

Term	Definition
1._____	_____
	_____
2._____	_____
	_____

4. Duplicating. Duplicating is a high-volume process that generally involves the preparation of master copies such as stencils and plates. These are used to reproduce copies by means of ink or the transfer of dye. Included in this category are the well-known stencil, spirit, and offset processes.

   In the stencil or mimeograpning process, ink is forced from a saturated pad through a stencil as it is rotated on the drum of the duplicating machine.

   The spirit process, often referred to as the hectograph process, employs special carbon paper containing aniline dye to produce a master from which an image is transferred to papers moistened with a special liquid.

   Offset duplicating is a versatile method producing a high quality of work. Offset is the process used most often in data processing for the reproduction of documents, reports, and other materials where quantity and appearance are important factors. Continuous-form offset masters can be used with computer print out devices and other business machines to prepare data for reproduction.

In the offset process, the inked image is transferred from a master on one rotating cylinder to another cylinder wrapped with a rubber blanket. In turn, the blanket transfers the image to copy paper that is fed into the machine and pressed against the blanket by an impression cylinder. (Arnolds, Hill, Nichols, 1978, 67)

Term	Definition
1._____	_____
	_____
2._____	_____
	_____
3._____	_____
	_____
4._____	_____
	_____

B. Synonyms

As an alternative to a formal definition, business-related occupational literature may clarify a technical term in the context by the use of a synonym. A synonym is a word or words which are similar in meaning to another word. The synonym may be enclosed in commas or parentheses directly following the term, or separated from the term by the word "or."

Example: In determining the selling price, the owner of a small store who purchases a crate (24 pints) of strawberries must consider in addition to the usual operating expenses, the probable loss due to spoilage.

Term	Synonym
crate	24 pints

Exercise B: Locate the term and the synonym in each of the given paragraphs.

1. From the general conceptual point of view we are dealing here with a step-by-step procedure or process which transforms the input into output. (Vazsonyi, 1977, 42)

Term	Synonym
_____	_____

2. The title holder, or rightful owner, of stolen goods is never stopped from exercising a claim to them even if the person in possession of them is an innocent purchaser of the property. (Rosenberg & Bonnice, 1976, 64)

Term	Synonym
_____	_____

3. Mary chose to review several different publications concerning credit. She learned that a credit institution (sales or consumer finance company), as opposed to a credit department of an institution (related store or bank) may use an organization chart. (Crawford & Lynch, 1979, 18)

	Term	Synonym
a.	_____	_____
b.	_____	_____

C. Inferential Clues

Sometimes an author makes the meaning of a word clear, but doesn't actually define it. Also, as mentioned before, a technical term may be defined once early in the book, and then used later without definition. In both cases, the reader must use all the clues in the surrounding sentences (the context) to determine meaning; he must infer the meaning. Students reading the following excerpt (UNI-COLL, 2-7) might not understand the words "Charging Algorithm." However, looking carefully at the contextual clues will help them to arrive at meaning. In this excerpt the useful clues are circled; students using these aids could determine that "charging algorithm" refers to measuring and cost.

Example: 2.4 CHARGING ALGORITHM

The UNI-COLL charging algorithm is designed to reflect an equitable, competitive and reproducible cost for system resource usage while at the same time encouraging sound programming techniques in order to achieve maximum system throughout the responsiveness. The resource categories accumulated and charged for during job processing are as follows:

- CPU time is rounded to tenths of a second before charges are computed. Jobs submitted in non-Batch Monitor classes will incur a CPU assessment overhead of a half-second for CONVERSION processing (this includes TYPRUN=SCAN jobs), and a half-second for the INTERPRETER phase (see Section 4.1.1). If a JCL syntax error is discovered during CONVERSION, the job will be charged only a half-second of CPU overhead.

- Channel usage based on disk and tape I/O activity. DASD channel utilization is measured by the number of execute channel programs (EXCPs) issued during the job step. Tape drive channel utilization is measured by the actual duration, in seconds, of all start I/O commands (SIO) from issuance to channel end condition.

- Unit record activity charges will be made for the number of records spooled, cards read, lines printed, and cards punched. In addition, all print train, print form changes, and print and punch materials are charged for depending upon policies in effect at the individual remote site. Output produced at the UNI-COLL site will be charged for these resources.

- Storage units are computed on a step basis as a function of the requested region size and pseudo step time (PST). PST is the sum of the CEU time, DASD and tape channel time, and may be computed using the formula.

Exercise C: Read the following three selections and then briefly list the clues which would help the reader analyze the meaning or partial meaning of the term given.

1. Every business that plans to continue in operation must give thought to replacing worn out or obsolete fixed assets. For instance, a delivery truck used by a retail store will have to be replaced at some future date. Also, if the business is highly successful, it is possible that the store may wish to buy another delivery truck. (Everard & Shilt, 1979, 236)

   a. Term: Obsolete fixed asset

   b. Clues which could help reader arrive at meaning:

   c. Inferred definition:

2. The salesperson must be sure to answer the big question in the mind of the prospect: "What will it do for me?" The salesperson must remember that prospects are interested in benefits or advantages. They do not buy products as such; they but benefits. (Ernest, 1978, 96)

   a. Term: Prospect

   b. Clues which could help reader arrive at meaning:

   c. Inferred definition:

3. The license of certain personal service and health workers can be revoked on such grounds as fraud or conviction of a criminal act. Doctors, dentists, nurses, and pharmacists are subject to professional discipline, and many workers at lower levels can be responsible for such professionals being disciplines.

   The Arkansas State Board of Pharmacy had received complaints that people were able to buy prescription drugs or have prescriptions refilled at a certain pharmacy without a doctor's order. The state board sent an undercover investigator to the drugstore with a bottle containing one Enovid tablet and a fictitious label from another drugstore. The pharmacist, not knowing that his "customer" was an investigator, sold the drug. The pharmacist's assistant also played a role in the transaction by forging the name of a doctor to a prescription form and by typing

out the label for the bottle. About a month later the same procedure was repeated with the investigator presenting an empty bottle and requesting a refill. The pharmacist's license was revoked. Neither a court trial nor an appeal helped the pharmacist retain his license.

a. Term: Professional discipline

b. Clues which could help reader arrive at meaning:

c. Inferred definition:

Illustrations

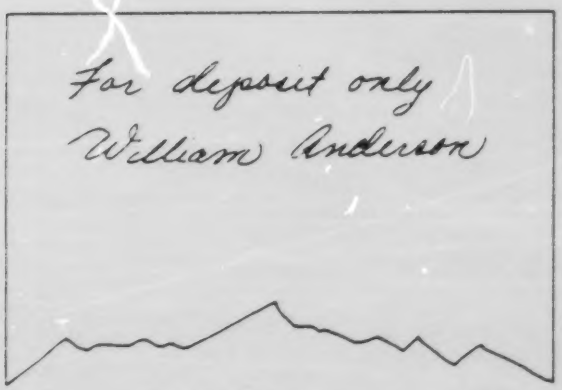
A common type of definition in an occupational text is the illustration or graphic material. Unfortunately, students often skip over the illustrations when they are reading -- assuming the printed words are more important. An initial task for the instructor is to emphasize to the students the need for immediate study of the designated figure whenever it is mentioned in the content of the text (Example: See Figure 8-2). The illustration will help them to visually understand the technical term to be learned. With repeated practice students will later apply the visual definition automatically to the term in context.

Example: Notice the way in which this illustration defines the terms that are explained in the text.

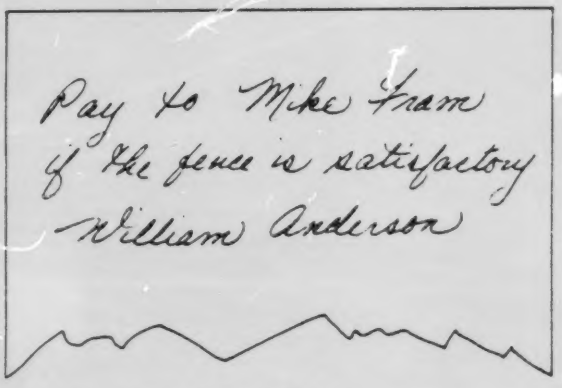
RESTRICTIVE ENDORSEMENTS
A check may be endorsed with the added words "For deposit only" or with a statement such as "Pay only to Jamie Sullins." These are the most typical examples of restrictive endorsements. An instrument may also be endorsed to a certain bank or to a collection agency with the notation "For collection only." In this case the bank or collection agency serves as an agent for the endorser and holds the instrument until the money is collected. The instrument is no longer negotiable.

CONDITIONAL ENDORSEMENTS
A conditional endorsement limits the transfer of a check by specifying a condition. For example, a check may be endorsed with this statment in addition to the endorser's signature: "Pay to Doe's Hardware Store when dishwasher is satisfactorily installed." If Doe's Hardware presents the check to a bank with Doe's endorsement, the bank will most likely cash the check, since the condition is between the hardware store and the customer. (Crawford & Lynch, 1979, 28-29)

Figure 10: Restrictive and Conditional Endorsements



Restrictive Endorsement



Conditional Endorsement

(Crawford & Lynch, 1979, 28)

Pg.# Terms	Pg.# Ill.	Terms
28	28	restrictive endorsement
29	28	conditional endorsement

Exercise D: Using each of the following illustrations and accompanying content material, list the occupational terms that are explained.

1.) FRINGE BENEFITS
In addition to the regular wages and salaries that are paid employees, most workers today receive supplementary benefits which are usually called fringe benefits. Figure 11 shows that fringe benefits represent a sizable portion of each person's total compensation - about 30 percent for the average worker in a recent year. If the payroll for a year for an employer amounts to $200,000, the extra cost to the employer for the fringe benefits is about $60,000. Over the last ten years the cost of fringe benefits has increased about 150 percent. Some of the most common types of fringe benefits are described here.

Figure 11: The Cost of Fringe Benefits

THE COST OF FRINGE BENEFITS

If a worker received an annual wage of $15,000, in a recent year the employer would have paid an additional $4,500 in fringe benefits. The fringe benefit amount is a 30 percent added payroll cost to the employer for each employee. The $4,500 in fringe benefits is divided as follows:

	Percentage	Amount
Pay for time not worked (vacations, holidays, sick leave)	28.5	$1,282.50
Social Security	16.4	738.00
Pensions, profit sharing	15.2	684.00
Health insurance	12.5	562.50
Rest periods at work	10.1	454.50
Unemployment compensation	4.3	193.50
Life insurance	2.0	90.00
Worker's compensation for job-related injuries	.6	27.00
All other benefits	10.4	468.00
Totals	100.0	$4,500.00

Basic Data: United States Department of Commerce estimates by *U.S. News & World Report*

(Everard & Shilt, 1979, 434)

Pg. # Terms	Pg. # Ill.	Terms

2.) The main body of the sales presentation consists of the sales talk and the sales demonstrations. The sales talk appeals chiefly to the prospect's sense of hearing. Since it is difficult for people to absorb information by listening to it, the salesperson must fill the sales talk with many interesting examples and instances. The salesperson should remember to fit the prospect into stories wherever possible. The sales demonstration illustrate the features of the product effectively by appealing to the sense of touch, taste, smell, and most of all sight. These demonstrations should be designed to prove the statements the salesperson has made about what the product has or what it can do. If possible, the salesperson should have a demonstration for each feature. (Ernest, 1978, 19)

Figure 12: Sales Presentation

The main body of the sales presentation includes a sales talk and a demonstration. The sales talk tells about the product, and the demonstration shows how the product will perform and how it will benefit the customer.

(Ernest, 1978, 19)

Pg.# Terms	Pg.# Ill.	Terms

3.) A trademark is composed on any word, name, symbol, or device or combination thereof and is used to identify and distinguish the goods of one producer from those produced by another.

Similar to trademarks that identify tangible goods, service marks are used to distinguish the services of one person or firm from those of another.

Certification marks are used on or in connection with the goods and services of one or more persons other than the owner of the mark. They indicate that the user certifies origin, material, method of manufacture, quality, accuracy, or other characteristics of the goods and services. (Rosenberg & Bonnice, 1976, 41)

Figure 13: Trademarks, Service Marks and Certification Marks

(Rosenberg & Bonnice, 1976, 41)

Pg.# Terms	Pg.# Ill	Terms

Glossaries

Many current vocational texts include glossaries (listings of important vocabulary) at the end of the chapter or at the conclusion of the book. The teacher's task is to stress the need for the student to use this vocabulary aid. During much of the course students should be required to review the glossary before beginning a new chapter. Students would either review the one at the end of the new chapter or those words indicated by the teacher in the glossary in the back of the book. As students read the chapter and encounter a new word that is defined in the glossary, they can note it on notebook paper, along with the definition. This can be included with the notes on that particular chapter -- either within the class notes or on a separate piece of paper.

Exercise E: Suggested Reinforcement Activities/Textbook

Select an introductory chapter from the vocational text you use in your teaching. Look for the vocabulary aids just introduced and discussed.

This will help you to better understand the skill and its major parts and will show you examples to use when teaching this skill. These same activities can be assigned to your students for practice and reinforcement of the vocabulary skills.

I. Contextual Analysis

A. Formal Definitions

	Pg.#	Term	Clue Word	Definition
1.				
2.				
3.				
4.				
5.				

B. Synonyms

	Pg.#	Term	Synonym
1.			
2.			
3.			
4.			
5.			

	Pg.#	Term	Definition	Clues (Words, Phrases)
1.				
2.				
3.				
4.				
5.				

II. Illustrations

	Pg.# Ill.	Terms defined by illustration
1.		
2.		
3.		
4.		
5.		

III. Glossary

	Pg.#	Terms found in glossary for this chapter
1.		
2.		
3.		
4.		
5.		

Procedures: Teaching Students Improved Vocabulary Skills

Vocabulary skills should be introduced and practiced throughout the course. Instruction of new techniques and discussion of examples will require approximately 10-15 minutes. Giving students the chance to recontact the word is very important since this is what helps the new occupational term to remain in a student's vocabulary. A new word is easily forgotten if it is not "seen again." These terms should be recontacted over a period of time. Suggested activities for recontact are:

1) Teacher reviewing students orally in class.
2) Students reviewing each other orally.
3) Teacher assigning students to write a paragraph using five of the technical terms recently or previously learned.
4) Students making flash cards for quick review, with word on the front and definition on the back.
5) Teacher using a CLOZE paragraph where students must fill in appropriate occupational terms.

Additionally, students should be encouraged to keep a collective list of content vocabulary with definitions and page location in text per chapter. With this, students can recognize words to be learned and see the relationship the words have to each other in that particular chapter. They will have a definite guideline for words to be learned. This activity can be classwork, be assigned as homework, and be evaluated for credit.

In selecting paragraphs and specific examples to teach the vocabulary skills, begin simple and increase to the longer and the more difficult. Students first need to gain confidence in the particular vocabulary skill. This can be done with both the textbook materials and the manufacturers' materials.

The instruction of vocabulary skills should be spread throughout the course. Introduce each vocabulary technique and give opportunity for practice. Emphasize the "occupational" terms since the learning of them is vitally important to the understanding of the written material, whether text or manufacturers'.

SECTION 6
DEVELOPING COMPREHENSION SKILLS:
THE PARAGRAPH

DEVELOPING COMPREHENSION SKILLS/THE PARAGRAPH

Understanding paragraph organization is an important reading skill for the vocational student. A paragraph has three major components:

1) the subject (what is being talked about)

2) the main idea (the most important information about the subject)

3) the supportive information (details that make the information clearer)

Of these, the main idea is the most crucial, for the key points of a chapter or article are simply selected main ideas from component paragraphs.

Look at the following paragraph. Search for the subject, the main idea, and the supporting details.

> The typical office employee has numerous opportunities to commit the tort of slander, and it is important to remember that any spoken words that damage the name or reputation of a customer, co-worker, or competitor must be provable if need be. Because of the widespread use of recording equipment, workers today must be especially careful of what they say. No one can ever really be sure that his or her conversation is entirely private. (Rosenberg & Bonnice, 1976, 107)

The subject here is "slander within the office setting." All parts of the paragraph refer to that topic. The main idea, or collection of the most important information is: "An office worker should recognize that the content of his conversations may be heard and that he must be responsible for any damaging words spoken toward a co-worker, customer or competitor." The rest of the paragraph provides supportive information, such as: "Because of the wide-

spread use of recording equipment . . ." and "No one can ever be sure that his or her conversation is entirely private."

Paragraph Subject

The key to finding the subject of the paragraph is locating the one topic that everything else in the paragraph is related to. A paragraph usually discusses one small aspect of a larger topic; therefore, the paragraph subject must not be too general. It must identify the specific topic being discussed. At the same time, the subject cannot be too specific, as it must cover the range of the ideas presented in the paragraph.

Example: Read the following paragraph and look for its subject.

> Today, there is not that much difference between banks and savings and loan associations. However, the name or title savings and loan usually applies to institutions that gather great sums of money for lending and investment by accepting as deposits small sums of money from thousands of individuals. The money collected is then primarily loaned for residential housing. Savings and loan associations nearly always pay interest on the amount of money that is deposited. This is not true with most deposits in a bank checking account. (Crawford & Lynch, 1979, 4)

In this example students might select "saving money" as the subject; this is much too general. Conversely, a chosen subject of "interest paid on money saved" would be too specific. The correct choice of subject is "functions of the savings and loan association."

Exercise A: Determine the subject of the following paragraphs Be certain that all paragraph information relates to that subject.

1) A buying motive is a reason that causes a prospect to buy. Salespeople should appeal to prospects' buying motives to get action. To do this, they must find out what people want. (Ernest, 1978, 27)

Subject: _____

2) Another function communication system elements perform is the processing of data. In this role the system element processes data into information, as we will discuss later in the section of data-processing system operation. The function may, of course, be performed by individual human beings, groups of individuals using various mechanical aids, or computers. Regardless of form, each of these data-processing systems performs a vital role in the communication system. (Alexander, 1974, 86)

Subject: _____

3) A party who fails, after a reasonable time has passed, to perform contractual obligations has breached the contract. The breach occurs whether the party has completely or partially failed to perform. In the case of complete failure, the contract is terminated. Partial failure to perform may require the injured party to pay for the work that has already been done. (Rosenberg & Bonnice, 1976, 57)

Subject: _____

Paragraph Main Idea

The main idea of a paragraph includes the most important information of that paragraph. The following four guidelines can help in its location:

1. If the paragraph includes the definition of a term, that term might be part of the subject. The definition might be part of the main idea.

2. If there are examples, these may illustrate all or part of the main idea.

3. If a key word or phrase is repeated, it might be part of the subject or main idea.

4. Highlighted words might be part of the subject or main idea.

Note that the work "might" is used in each instance. These guidelines can point toward possible main ideas, but they cannot automatically select the right one.

The main idea is not necessarily the topic sentence. It is a statement which includes all the most important ideas of the paragraph. Looking effectively for this "framework" requires much practice. Therefore, writing a statement of main idea is helpful, and recommended for teaching this skill of main idea. The following procedure should be used when making a statement of main idea:

1. Look for the most important ideas in the paragraph.

2. Write them in a statement in your own words.

3. Be brief and concise.

Example: Corporations are towers on the business landscape. While proprietorships are many in number, they are generally small in size. In comparison, corporations are few in number, but generally large in size. Because corporations tend to be large, they play a powerful role in the economy of our country. For example, corporations employ millions of people and provide customers with many of the goods and services they need and want. In a recent year, corporate sales of goods and services were nearly eight times more than proprietorships and over twenty times more than partnerships. (Everhard & Shilt, 1979, 96)

A statement of main idea could be: Corporations, although fewer in number than proprietorships, are large operations which have strong impact on national economy.

Exercise B: Look at the following four paragraphs. First ask yourself what the paragraph is about (the subject). Then look for the main idea using the suggested guidelines. Note which guidelines are most helpful in each case. Finally, make a statement of main idea with aid of the suggested procedure. (It may be helpful to underline words and phrases which pertain to the important information.)

1) Salespeople must constantly bear in mind that customers have personalities too. Successful salespeople learn to make their own personalities mesh with the personalities of their customers. They are always asking, "What is my customer like? How can I conduct my sales interview so as to make him (or her) feel better personally?" (Ernest, 1978, 118)

   A. Subject: _____

   B. Statement of Main Idea: _____

   _____

   _____

2) There are many occasions when a finance or credit executive needs to write a letter. The purpose of a letter may be to confirm the acceptance of a request to speak at a banquet or to congratulate a customer who has been appointed to an important position. A sales letter may be written to persuade customers to take advantage of a particular service offered by the financial institution or store. A collection letter may be written to urge customers to keep their payments up to date. Or a letter concerning a promotional plan may be written to an

advertising agency. The content of the letters will vary according to the purposes of the letters. However, all the letters should reflect the basic principles of business letter writing. (Crawford & Lynch, 1979, 103)

A. Subject: _____

B. Statement of Main Idea: _____

_____

_____

3) 8.Z PROGRAMMED DATA TRANSFER
Programmed data transfer is the easiest and most common means of performing I/O. Each input/output transfer (I)T) instruction initiates one programmed transfer which may transmit data or status information either to or from a peripheral device. The amount of information that will be transferred by an IOT instruction depends upon the particular operation that is coded into the instruction and the design of the I/O device interface. In general, programmed data transfers are limited to a maximum of 12 bits of information per IOT instruction. (Digital, 1976-77, 8-1)

A. Subject: _____

B. Statement of Main Idea: _____

_____

_____

4) An accountant of an accounting firm may be held liable to a client for negligence, fraud or breach of contract in the preparation of financial statements. It has been generally held, at least until recently, that an accountant or accounting firm cannot be held liable for errors made in the preparation of financial statements to third parties with whom the accountant or firm does not have a direct contractual relationship. In the past the courts have

felt that if accountants were held liable for such negligence, the public interest would not be served. It was felt that an accountant owed no duty to strangers, even if the accountant knew that his or her accounting reports would be relied upon by persons other than the client, and that the accountant owed a duty only to the client for whose primary benefit the report was made. A few courts, however, take the position that under certain circumstances an accountant may be held liable for negligence to third parties who rely on reports despite the lack of a contractual relationship.

A. Subject: _____

B. Statement of Main Idea: _____

_____

_____

Paragraph Supportive Information

Authors use supporting ideas to carry out their main ideas. They may present these supporting ideas in several ways: giving particular cases, using a restatement, giving reasons, and making comparisons and contrasts (Blake, 1973, 23). Supportive information helps us to understand the meaning of the main idea, since it provides explanation. Each supporting idea must refer to that main idea.

Author's clues help us to locate supporting ideas. Examples of these clues are: "for example," "for instance," "that is," "in other words," "for these reasons," "consequently."

Example: Review this paragraph again, and look now for the supporting ideas.

Corporations are towers on the business landscape. While proprietorships are many in number, they are generally small in size. In comparison, corporations are few in number, but generally large in size. Because corporations tend to be large, they play a powerful role in the economy of our country. For example, corporations employ millions of people and provide customers with many of the goods and services they need and want. In a recent year, corporate sales of goods and services were really eight times more than proprietorships and over twenty times more than partnerships. (Everard & Shilt, 1979, 96)

A. Restatement of Main Idea:

Corporations, although fewer in number than proprietorships, are large operations which have strong impact on national economy.

B. Supporting Ideas:

1) Corporations employ millions of people
Clue words - "For example"

2) . . . provide customers with many of goods and services they need and want.
Clue words - "For example"

3) In a recent year, corporate sales were nearly eight times more than proprietorships . . .

** Notice that the supporting ideas lend explanation and example to the information in the main idea.

Exercise C:

Turn back to the paragraph in Exercise B in which you were to make statements of main idea. Use the main idea of each to help you locate supporting ideas. Remember that each supporting idea must relate to that main idea. (This can help you to determine the accuracy of your main idea.) For each of the four paragraphs in Exercise B record the main idea and the supporting ideas below.

1) Main Idea: _____

_____

Supporting Ideas:

1.

2.

3.

2) Main Idea: _____

_____

Supporting Ideas:

1.

2.

3.

3) Main Idea: _____

_____

. Supporting Ideas:

1.

2.

3.

4) Main Idea: _____

_____

Supporting Ideas:

1.

2.

3.

Paragraph Comprehension and Illustrations

Paragraph comprehension can be reinforced by the proper use of illustrative material. In business-related literature processes are often illustrated by sequential diagrams. These processes often include completion of documents. Students must learn to "read" the diagram in its proper sequence and to relate each phase to the appropriate portion of the prose (text material).

At other times non-sequential illustrations are used to highlight the important concepts (usually the main idea) presented in the prose that do not describe a process.

A. Sequential Illustrations

Figures 14 and 15 utilize step-by-step illustrations to clarify the text material. Selections such as these can be duplicated for student practice; students can integrate the text and the illustration by drawing lines from the words in the material to the corresponding phase of the diagram, or by cross-referencing (parallel labeling of the prose and illustration).

Figure 14: Approach, Demonstration, Close

(Ernest, 1978, 19)

An effective sales presentation consists of three phases -- approach, demonstration, and close. The purpose of the approach is to win the favorable and immediate attention of the prospect so that the prospect is willing to hear more about the salesperson's proposal. Having captured the prospect's attention and interest, the salesperson is now ready to move into the main body of the sales presentation. This includes a sales talk and a demonstration. The sales talk tells about the product, and the demonstration shows how the product will perform and how it will benefit the customer. The sales demonstration illustrates the features of the product effectively by appealing to the senses of touch, taste, smell, and most of all, sight. The sales close is designed to get action. The salesperson must make it easy for the prospect to buy. (Ernest, 1978, 19)

Figure 15: Cross-Referencing

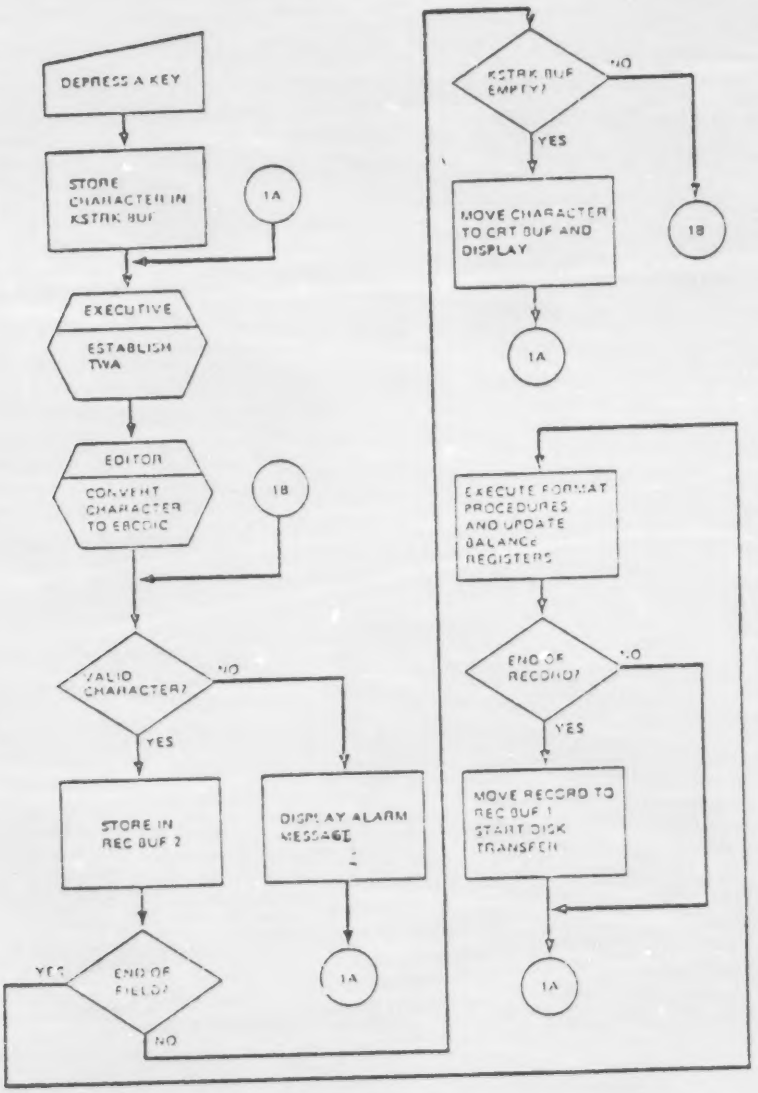


Figure 2-11. Keystroke Processing Data Flow

Now, cross-reference the following: (Figure 2-11 is included in Figure 15).

2.4.1 KEYSTROKE PROCESSING (Scandata 2250/2 System Engineering, 2-114-215)

Keystroke processing (See Figure 2-11) begins with a key depression at a terminal. This results in a interrupt which is acknowledged by the process and results in storing the character in a five character, key-stroke buffer (KSTRK BUF). The EXEC module is altered to this event. The executive, at the time slice allocated for that terminal establishes a terminal work area (TWA) and passes control to the EDITOR. The TWA includes record buffer 1 and record buffer 2 and sector buffer. The record buffers are used to accumulate and process data. The second buffer is used to attain maximum disk efficiency.

The EDITOR converts the incoming character to EBCDIC and initiates a work sequence.

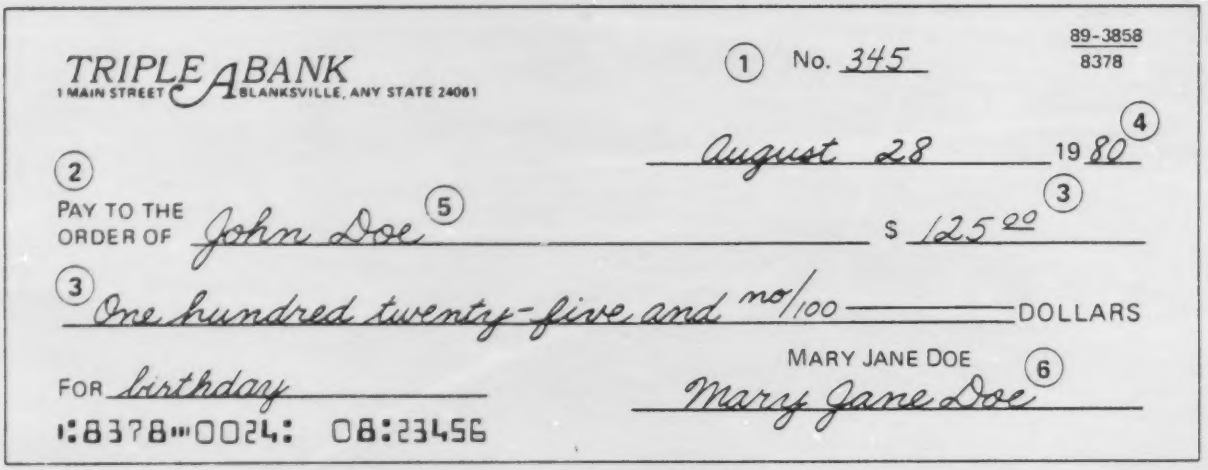
During the work sequence initiation, characters are accumulated in CMMD BUF and the requested work type is evaluated. Once the work type is established, batches are opened and format programs are loaded followed by normal data gathering.

Characters continue to be routed by the EXECUTIVE to the EDITOR. The EDITOR validates each character according to the format specification. If the character is valid, it is stored in REC BUF 2. Otherwise, an alarm message is displayed on the CRT. The end-of-field is checked and if not at the end of the field, KSTRK BUF is checked for additional characters to be processed in the same manner. If SKTRK BUF is empty, the accumulated characters are moved to CRT BUF for display and control is passed on to the EXECUTIVE.

At the end of each field, format procedures are executed and the balance registers are updated. Any alarm, DUP, or DISP procedures are executed at this time. The processing of fields continues in this manner until an end of record is reached.

Another type of illustration is the form or document. Sometimes the form is shown blank, while other times it is completed for reader clarification. The following illustration designates appropriate completion of a personal check. The accompanying prose indicates the procedure, which is cross-referenced in the illustration.

Figure 16: Personal Check


TRIPLE A BANK
1 MAIN STREET BLANKSVILLE, ANY STATE 24061

89-3858
8378

(1) No. 345

August 28 19 80 (4)

(2) PAY TO THE ORDER OF John Doe (5) $ 125 00 (3)

(3) One hundred twenty-five and no/100 DOLLARS

FOR birthday

MARY JANE DOE (6)
Mary Jane Doe

⑈8378⑈0024⑆ 08⑆23456

Figure 3-1 A credit instrument, such as the personal check, must contain these six elements to be negotiable.

(Crawford & Lynch, 1979, 25)

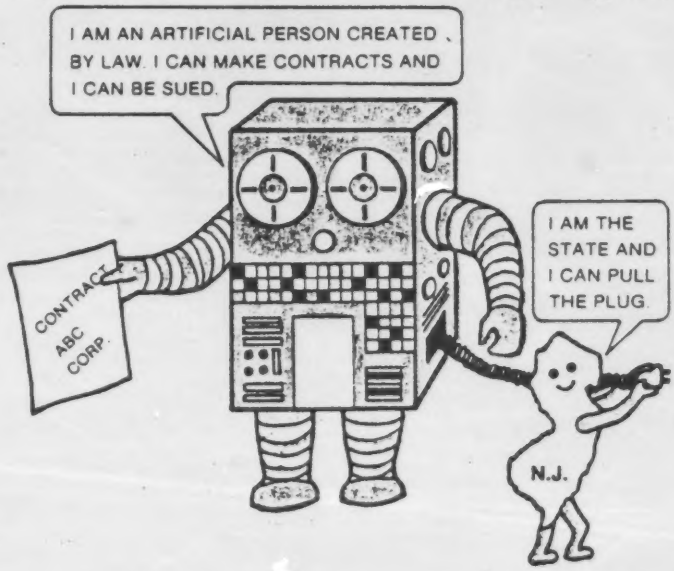
In the section of the Code concerning negotiable credit instruments, the conditions under which an instrument is negotiable are specified. If an instrument does not meet all the specifications of negotiable instruments, it is nonnegotiable. The Code states that if an instrument is to be classified as negotiable, it must include all the following elements, which are number-coded in Figure 3-1.

1. It must be in writing, not oral.
2. It must contain an unconditional promise or order to pay.
3. It must specify a sum of money to be paid.
4. It must be payable either on demand or at a fixed time.
5. It must be payable to order or to bearer.
6. It must contain the signature of the maker or drawer. (Crawford & Lynch, 1979, 24-25)

B. Non-sequential Illustrations

Figure 17 uses illustrations that are not sequential to clarify text material. In this case, a process is not described. Again students should relate each part of the illustration with the appropriate phrases in the paragraph by drawing connecting lines, or by cross-referencing.

Figure 17: Illustration


I AM AN ARTIFICIAL PERSON CREATED BY LAW. I CAN MAKE CONTRACTS AND I CAN BE SUED.
CONTRACT
ABC CORP.
I AM THE STATE AND I CAN PULL THE PLUG.
N.J.

Illus. 6-1. In the eyes of the law, a corporation has many of the rights and responsibilities of a person.

(Everard & Shilt, 1979, 97)

A corporation is, in a sense, an artificial person created by the laws of the state. A corporation can make contracts, borrow money, own property, and can sue and be sued in its own name. Any act performed for the corporation by an authorized person, such as an employee, is done in the name of the business. For example, the treasurer of a corporation has the power to borrow money for the business. An unauthorized employee, such as a clerk who was hired to file papers and type letters, could not borrow money for the corporation. (Everard & Shilt, 1979, 97-98)

Exercise D: Suggested Reinforcement Activities/Textbook

1) Select 4 paragraphs of average length, each from a different chapter of your textbook. Identify the subject in each.

	Page #	Column #	Paragraph #	Subject of Paragraph
1.				
2.				
3.				
4.				

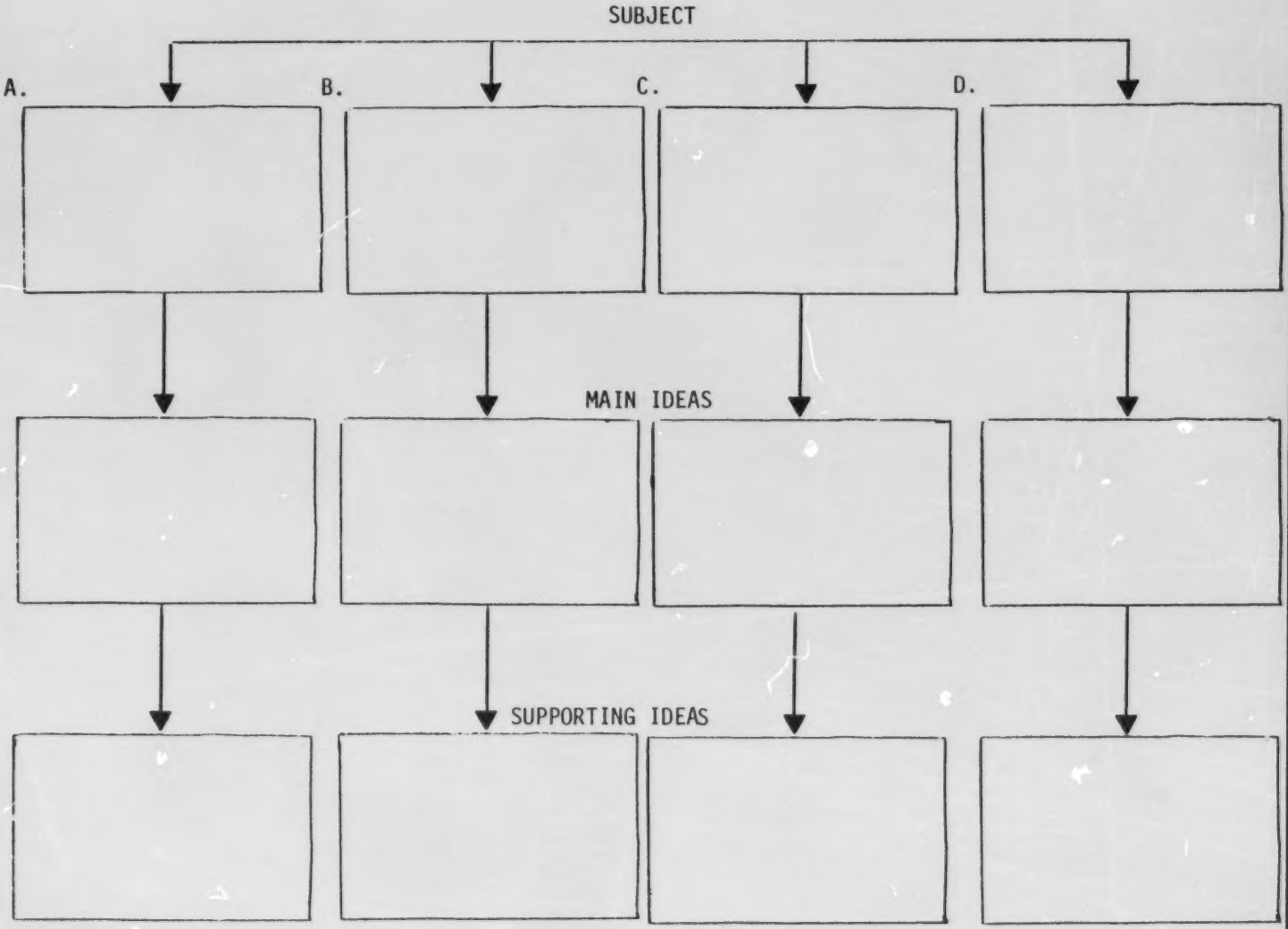
2) Select four paragraphs from your textbook, each from a different chapter. Identify the subject, and write a statement of main idea for each.

	Page #	Column #	Paragraph #	Subject	Statement of Main Idea
1.					
2.					
3.					
4.					

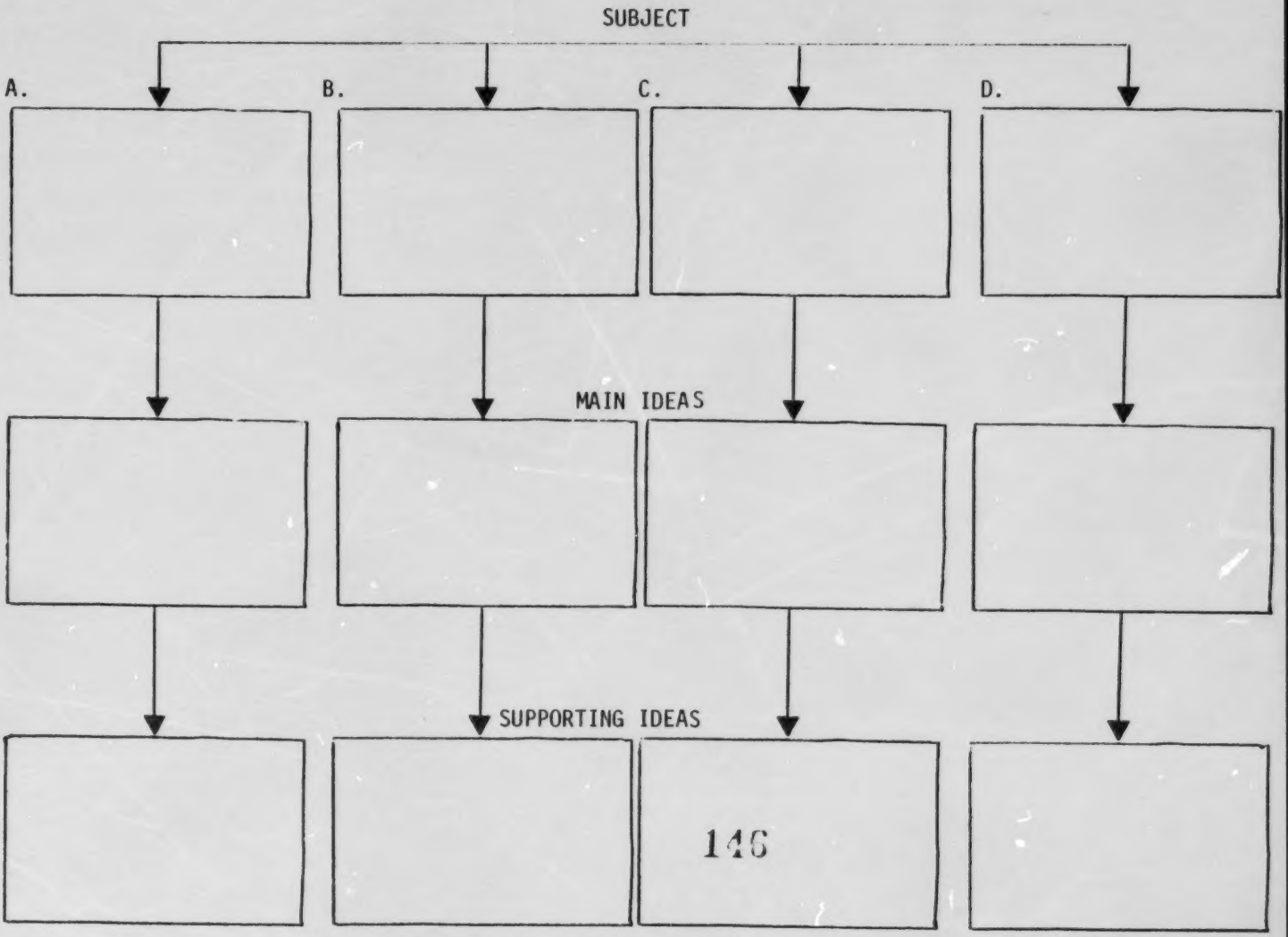
3) Next, choose four sequential paragraphs of a text chapter. Identify the subject and write a statement of main idea for each.

	Page #	Column #	Paragraph #	Subject	Subject of Main Idea
1.					
2.					
3.					
4.					

4) Take the same paragraphs selected for item #2 and find supporting ideas. Complete the following chart.



5) Use the same paragraphs selected for item #3 and find supporting ideas. Complete the following chart.



6) Select four sequential and/or non-sequential diagram that illustrate the main idea of a paragraph within the text material.

	Pg.# Ill.	Pg.# Prose	Subject
1.			
2.			
3.			
4.			

Procedures: Teaching Students to Better Understand the Paragraph

Understanding the paragraph is one of the most important and one of the most difficult reading skills the vocational instructor must teach. It is the basis of understanding what is read; it is definitely needed knowledge for the higher-level comprehension skills, which are necessary for business-related literature.

Recognizing the framework of the paragraph (the subject, the main idea, the supporting ideas) requires the ability to distinguish. Students need careful guidance in identifying the subject, and distinguishing among main idea information, supporting idea, and

material that is totally unimportant. It is necessary to introduce the material slowly and incrimentally, as was done here. Students need to be aware of the importance of their understanding the paragraph, so that they can exert maximum effort to this reading skill.

In your instruction, move slowly through the information. Three or more class sessions should be given to the introduction of each of the paragraph components, with assigned practice for outside of class. When the students show competence with the first component (the subject), move to main idea and introduce this gradually, presenting and practicing each of the four clues. With main idea, emphasize the concept of "what is the most important information the author is giving you in this paragraph." Discuss how to make a statement of main idea by using the suggested guidelines. The practice of writing the main idea will help to clarify this skill and to make it a usual reading behavior.

Then progress to the supporting ideas, discussing the different types and emphasizing the function of this component. Students should clearly understand that supporting ideas must relate to the main idea, and that they help to explain.

Practice with integrating text material and illustrations will be equally useful to your students. Business-related literature contains various illustrations and diagrams which help to explain the main points expressed in the prose. The visual reinforcement can be most beneficial.

Important Considerations:

A. Introduce paragraph components gradually over a period of time.

B. These skills need to be practiced frequently so the students can acquire competence with them.

C. In using text extractions for examples and assigned practice, begin short and build to longer selections. Also, begin easy and increase to more difficult material.

D. The paragraphs you identified in "Suggested Reinforcement Activities" can be assigned for location of subject, main idea, and supporting ideas.

E. The activities in "Suggested Reinforcement Activities" are effective practice for the paragraph skills and can be assigned to your students as well.

SECTION 7
DEVELOPING COMPREHENSION SKILLS:
RECOGNIZING AND RECORDING COMPLEX INFORMATION

DEVELOPING COMPREHENSION SKILLS/ RECOGNIZING AND RECORDING COMPLEX INFORMATION

In business-related literature there are large amounts of new information to be learned. Within this information there are logical relationships--classification, comparison, and causality. Recognizing these relationships and learning how to record them efficiently for study can be beneficial to the understanding of the material.

The nature of these relationships should be established. Classification in its simplest form is listing. Comparison is the process of finding likenesses and differences. Causality, or cause-effect, is that which results from something else. These will be further discussed with accompanying examples.

Classification

Classification is a listing of information. The use of classification can be signaled by the following: a colon (:); numbers or letters; words such as "these include." At other times it is simply introduced by a statement: "there are four major principles of business letter writing."

Information which includes classification can be recorded by simple listing if single items are given, or by outline when items are more complex and require explanation.

Example:

A. Simple Listing

There are several items of equipment commonly used by tellers in banks and other banking

institutions. Some of the equipment is also used by other employees in finance and credit. The equipment that tellers should know how to use includes:

(1) the electronic calculator
(2) the teller machine
(3) the check writer
(4) the change-dispensing machine
(5) the microfiche reader
(6) the computer terminal
(7) the teller vault
(8) the encoding machine
(Crawford & Lynch, 1979, 33)

For study purposes the student could record: --Bank tellers should be able to use the following equipment:

B. Outlining

In addition to the financial and statistical data required by governmental agencies, business enterprises must furnish annual reports to stockholders, and various data to customers, creditors, and the general public. Some external data needs have their counterparts within the organization. Payroll records, for example, provide necessary internal data and also form the basis for financial and personnel reports to the government and to unions.

Internal needs fall broadly into two classes: operations and control. First, a tremendous amount and variety of routine operating documents are necessary as evidence of (1) primary transactions with customers and vendors; and (2) subsequent activities involving production, personnel, materials, equipment, and accounting. For example, the issuance of a purchase requisition indicating a departmental need for materials may start a chain of events requiring the completion of many additional forms and records. These might include a request for quotation, purchase order, receiving record, inspection report, inventory record, and voucher check in addition to necessary accounting entries.

> The second internal need is for data to be compiled in informative reports for use in analyzing progress, determining policy, solving problems, and planning actions of the future. The much-discussed "information revolution" of recent years has created a whole new dimension in data processing. The objectives of data processing now extend far beyond the routine handling of transaction documents and records of other types. Providing management with timely information to facilitate greater control and improved decisions has become increasingly important. (Arnold, Hill, and Nichols, 1978, 3)

An outline, such as the following, could be recorded by the student:

Internal data needs

A. Operations documents of
   1. transactions with customers and vendors
   2. production, personnel, materials, equipment, and accounting activities
      a. ex. purchase order

B. Control reports for use in
   1. analyzing progress
   2. determining policy
   3. solving problems
   4. planning future actions

Modified outline charts can also be constructed for the classification of complex information. Some students prefer the "visual grouping" of the charting procedure, as compared to the written outline. Notice the following example, extracted from Everard & Shilt (Figure 18, Business Principles & Management (1979), 255)

Example:

Figure 18: Modified Outline Chart

FREQUENTLY USED FINANCIAL RATIOS

Ratio	Calculation	Crown Corporation*	Purpose
Return on Sales	Net Profit / Sales	$ 20,000 / 200,000 = 10.0%	Shows how profitable a firm was for a specified period of time
Inventory Turnover	Sales / Mdse. Inventory	200,000 / 16,000 = 12.5	Shows whether the average monthly inventory might be too large or small
Current Ratio	Current Assets / Current Liabilities	24,000 / 8,000 = 3.0	Shows whether a firm can meet its current debts comfortably
Return on Owners' Equity	Net Profit / Owners' Equity	20,000 / 100,000 = 20.0%	Shows whether the owners are making a fair return on their investment
Return on Investment	Net Profit / Total Assets	20,000 / 134,000 = 14.9%	Shows rate of return on the total money invested by owners and others in a firm

*See illus. 13-3, 13-5, and 13-8 for source of figures for calculations.

Illus. 13-9. Ratios that can be easily calculated help judge the financial condition of a business.

Exercise A: Classify the following information on a separate piece of paper. Construct an outline or an outline chart to record the material from Everard & Shilt (1979, 310-311), which discusses federal credit laws. Look for the similarity of type of information offered in the explanation of each law.

Federal Credit Laws. Federal credit laws have been passed in recent years that affect credit relationships between retailers and consumers. These laws apply to such areas as fair and equal credit rights, the cost of credit, and the process for correcting errors on credit transactions.

Equal Credit Opportunity Act. The Equal Credit Opportunity Act, passed in 1974, makes it illegal to deny an applicant credit because of age, sex, marital status, race, and national origin. The age of the applicant however, may be used to deny credit if it affects the financial soundness of a business transaction. Legally credit may be denied a person too young to sign contracts or too old to carry out a long-term credit request. For example, a person aged 65 who requests a 25-year credit plan to buy a home may be denied credit because the person may die before the debt is completely paid. However, a person aged 65 with a good credit history who requests credit terms for six months, for instance, should not be denied credit solely on the basis of age.

Women are entitled to the same credit rights as men. In the past, when a husband and wife obtained credit, only the husband's name appeared in credit records even though both spouses could make credit purchases. This situation became especially unfair under certain conditions. If the husband died, for example, the wife was often refused credit because she had no established credit record. No longer is it legal in such situations for only the husband's name to appear on shared credit accounts and in credit records. Both husband and wife have the right to open separate accounts with the same creditor if both are creditworthy.

Still another provision of the Equal Credit Opportunity Act is that an applicant must be notified by the creditor within thirty days of the decision made on the application for credit. If credit is refused, the applicant must be notified in writing. Furthermore, the applicant has the right to know why credit was refused. A specific reason, such as not being employed at a job long enough, is acceptable; but a vague reason, such as stating that the applicant is not worthy of credit, is not valid.

Truth-in-Lending Act. The Consumer Credit Protection Act, passed in 1968, is better known as the Truth-in-Lending Act. The initial law and its later amendments contain many protective provisions for those who buy on credit. Some of the major requirements under the law are shown in Illus. 16-4. Most requirements are a direct result of offensive credit practices. The law has had a major impact on credit practices.

Fair Credit Reporting Act. Credit agency files contain a great deal of information about consumers. This information is usually obtained from retailers, employers, banks, and other sources and is used as a basis for giving or refusing credit. As a result of processing large amounts of information, occasional errors occur. To protect consumers from inaccurate or out-of-date information appearing in credit agency files, the Fair Credit Reporting Act was passed in 1970. Under this law, a person has a right to see information in credit agency files and to have any errors in the files corrected.

Comparison

While classification is commonly used in business-related literature, it is seldom used alone. Once the elements of a topic have been classified into sub-topics, these sub-topics are usually compared. The textbook often provides comparison charts in which the topics to be compared are given along one axis and the features of comparison are given along the other. Students need practice in correctly reading such charts, including instructions in reading captions and footnotes. If a comparison chart does not accompany the text information, then a student can construct his own. It is important that the student understands the organization of this type of chart before he constructs his own. Use a chart such as the following as a model for review by students (Figure 19 Everard & Shilt, 1979, 262). This chart indicates sources and percentages of initial capital investment for small businesses.

Example:

Figure 19: Comparison Chart

Sources	Percentage of Total
Cash and savings of operator	52.5
Previous investment in the business	8.1
Loans from banks and other institutions	15.7
Loans from family	6.9
Loans from friends	4.7
Credit from suppliers	6.0
Loans from previous owners	2.7
From surrendered insurance	0.1
Other unspecified sources	3.3
	100.0

Source: Small Business Administration

Illus. 14-1. Sources of initial capital investment.

This comparison chart is relatively simplistic in which singular items are compared. Students should then be exposed to comparison of a more difficult nature in which ideas are compared. Note the following chart in Figure 20 taken from Ernest (1978, 82).

Example:

150

Figure 20: Comparison Chart

This chart presents an analysis of customer objections regarding a specific appliance.

PRODUCT: EXTRAMAID FOOD BLENDER

TYPE OF OBJECTION	POSSIBLE OBJECTION	SUGGESTED ANSWER
Need	I can't believe I'll get enough use out of it. It'll just wind up taking up cabinet space.	My wife felt the same way you do about it, but she finds she never puts the blender away. It's used about six or eight times a day at our house. My wife uses it constantly to save time in cooking—from mixing the frozen juice in the morning to chopping things like onions, green peppers, and nuts. It's also used to make bread or cracker crumbs, to puree vegetables and meats for soups, and so on. Then the kids come in and make milk shakes. And when I come home, I make myself a cold drink with it.
Product	They're starting to make blenders in colors now. I was hoping to find a pink one to match my kitchen.	The blenders with the enamel bases do look very attractive when they're brand new, but I'm sure you realize how readily enamel chips. We've found that our stainless steel base maintains its beauty for many years and looks handsome in any kitchen scheme.
Source	Your company makes only blenders? I've always had the feeling that the big electric companies have the know-how when it comes to appliances.	Bigness has its advantages, of course, but so does specialization. We are able to concentrate all our talents on just this one product, and we think our blender is as perfect as they come. I'm sure you realize that only a really superior product would keep us from being overcome by the big companies.
Service	I can't count on that glass container lasting very long around my house. I'll bet it takes months to get a replacement.	I understand why you might feel that way. I know that often happens with small appliances, but every dealer who handles the Extramaid food blender is kept well supplied with replacement parts. And each dealer, in order to get the franchise, must send a mechanic on the staff to the factory to learn how to repair the machine properly. There's none of this business of having to send the blender back to the factory for the smallest problem.
Price	I'm sure you know as well as I do that your blender is the most expensive one on the market.	That may be true, but we count on the fact that the buying public has become very sophisticated and realizes you only get what you pay for. We're so sure that our blender is the best on the market that we guarantee it for 3 years, as opposed to the usual 1-year guarantee.
Time	I can see that it's a very handy gadget, and I certainly would like one someday, but I think I can get along awhile longer without it.	There's something to be said for not rushing into things, of course. But our company has received many letters from people who say they don't know how they ever got along without their blenders. Here are a few sample letters. I think you can tell from them that the advice of these people would be to start enjoying the advantages of the blender as soon as possible.

Example: In data processing texts or manuals, comparative discussions are not common, but comparison charts are. The charts are frequently technical, with emphasis on the recording of data. Notice the following chart:

Figure 21: Comparison Chart

See Table I below for conductor sizes for different lengths of wiring runs to keep the voltage drop to 2 volts or less under a load of 40 amperes at a conductor temperature of 40° C.

TABLE I MAIN WIRING CONDUCTOR SIZES AWG CU OR EQUIVALENT

One-Way Length of Run Ft. (m.)	115/230 v. Single Phase 3 Wire All Three Conductors
Up to 37 (11)	No. 8 AWG Cu
37 to 67 (11 to 20)	No. 6 AWG Cu
67 to 91 (20 to 28)	No. 4 AWG Cu
91 to 146 (28 to 45)	No. 2 AWG Cu

One-Way Length of Run Ft. (m.)	120/208 v. Three Phase 4 Wire All Four Conductors
Up to 50 (15)	No. 8 AWG Cu
50 to 78 (15 to 24)	No. 6 AWG Cu
78 to 123 (24 to 37)	No. 4 AWG Cu
123 to 197 (37 to 60)	No. 2 AWG Cu

(Ibid)

Example: A different type of comparison chart, the evaluation chart, is used in certain business-related texts -- e.g., selling. With this, the student is evaluated on performance of information and concepts instructed. It is useful for students to be familiar with evaluation charts, as they are utilized in the business fields. And . . . students can benefit from evaluation of self and/or others. Specific guidelines help to improve performance. Following is an evaluation guide to be completed on a written sales presentation presented by a student. Notice the categories and the range of rating. (Ernest 1978, 108)

Figure 22: Comparison Chart/Evaluation Chart

EVALUATION GUIDE FOR WRITTEN SALES PRESENTATION

Name of student _____ **Date** _____

Product _____

ACTION	VERY WEAK	BELOW AVERAGE	AVERAGE	ABOVE AVERAGE	EXCELLENT
APPROACH					
1. Used a good opening statement					
2. Determined the prospect's need or problem					
3. Established a friendly atmosphere					
DEMONSTRATION					
4. Had a well-organized sales presentation					
5. Demonstrated each feature					
6. Demonstrated the obvious features first					
7. Let the prospect participate					
8. Stressed the benefits of the product					
9. Tried to get commitments from the prospect during the presentation					
HANDLING OBJECTIONS AND EXCUSES					
10. Restated the objection					
11. Used the "Yes, but" method					
12. Answered briefly					
13. Asked for the order or made a trial close					
CLOSE					
14. Helped the prospect decide					
15. Made a smooth, effective close					

Remarks _____

Exercise B:

1) Simplistic Comparison

Construct a comparison chart from the following selection on finance and credit equipment (Crawford & Lynch, 1979, 33), a topic briefly covered in the classification section. Major comparison should be between the various items of equipment and the primary function of each.

FINANCE AND CREDIT EQUIPMENT

There are several items of equipment commonly used by tellers in banks and other banking institutions. Some of the equipment is also used by other employees in finance and credit. The equipment that tellers should know how to use includes (1) the electronic calculator, (2) the teller machine, (3) the check writer, (4) the change-dispensing machine, (5) the microfiche reader, (6) the computer terminal, (7) the teller vault, and (8) the encoding machine.

The Electronic Calculator
The electronic calculator is an electrically powered machine on which the four fundamental arithmetic operations--addition, subtraction, multiplication, and division--can be performed with accuracy and speed. It is gradually replacing the adding machine in most financial institutions.

The Teller Machine
The teller machine is a bookkeeping machine designed to record the amount of each cash-in and cash-out transaction that takes place at a teller's window. A teller presses the button that indicates the type of transaction and then records the amount of the transaction. The machine functions like an adding machine.

The Check Writer
The check writer is a machine designed to emboss a name and an amount on a check in such a way that the check cannot be altered without easy detection. It is operated like a typewriter.

The Change-Dispensing Machine
The change-dispensing machine is designed to hold a supply of coins needed for making change at a teller's window.

The Microfiche Reader

As the name implies, the function of the microfiche reader is to make it possible for users to read a microfiche. A microfiche is a small rectangular film on which as many as sixty pages of printed copy may be recorded. A microfiche is inserted in the indicated space at the base of the machine. When the light that magnifies the print is turned on, the film can be read. A lever that moves vertically and horizontally allows a user to move from page to page. The microfiche reader is less used today because of the increased use of computer terminals instead.

The Computer Terminal

Computer terminals are electronic machines that allow users to obtain available information about customers' accounts. A teller types a customer's account number into a computer terminal located at the teller's window. The teller can see on the screen a record of the customer's current checking account or savings account. This record indicates any notations that may affect a transaction as well as the current balance in the account. The account number of a customer may also be obtained by typing a specified code number and the customer's name.

Some computer terminals are linked with outside computers. For example, the computer terminal in a savings and loan branch office may be linked with a computer that serves members of the savings and loan association in an entire region. The branch office machines may be capable of processing loan payments as well as providing and receiving credit information. Or, a computer terminal in a store may be linked with the computer in a local credit bureau.

The Teller Vault

The teller vault is a storage place for currency and coins needed for a day's transaction. Only a limited amount of money is permitted in this vault, which is below the teller's window. Throughout the day, excess currency and coins are transferred from the teller vault to the main vault.

The Encoding Machine

The encoding machine is designed to print MICR (Magnetic Ink Character Recongition) characters on checks, deposits, and other documents to be processed by a MICR sorter/reader. The encoding machines used by tellers are chiefly for printing customer's numbers on temporary checks and deposit slips.

2) More Difficult Comparison

Construct a comparison chart from the following selection on legal restraints of trade (Rosenberg & Bonnice, 1976, 40-42). There are many possibilities for categories with the named restraints of trade: What does it mean? Who enforces it? Who issues it? What is protected? Has this occurred in the past? (Examples could be included)

LEGAL RESTRAINTS OF TRADE

Trade secrets. Trade secrets may be protected by agreements between employer and employee. If, for example, a secret process or a scientific formula is involved or if the work is of a confidential nature and disclosure would result in injury to the employer, the employer may, in the protection of his own business and within reasonable bounds, impose restrictions of secrecy on the employee or forbid him or her to work in the same line of business for another firm should the employee leave the company. Not all such contracts, however, are enforceable. The most important determinant is whether the agreement is reasonable. It would be reasonable for a company with a highly secret process to require their key people or scientists to agree not to work for a competitor for, say, three years. But if the same company required all employees--including shipping clerks, accountants, and so on--to sign an agreement, it would be unreasonable. By the same token, it would be unreasonable to require the employee to avoid employment with a competitor for, say, twenty years.

Brody, an electronics technician, was hired by the Electrol Company to work on the development of highly secret equipment. Brody agreed in writing not to work for another electronics company for three years after leaving Electrol. This contract is enforceable since Brody's leaving would place Electrol at a serious competitive disadvantage, because of the possibility of disclosure of Electrol's know-how.

Trademarks. A trademark is composed of any word, name, symbol, or device or combination thereof and is used to identify and distinguish the goods of one producer from those produced by another.

Trademark registrations are issued by the United States Patent Office for renewable periods of twenty years. The person in whose name a trademark is registered or to whom it has been assigned may prevent others from (1) using the trademark in connection with either competing or noncompeting goods, (2) using the trademark in the same or in a similar line of business, and (3) using marks or names so similar to those registered that people may confuse them.

Service marks and certification marks. Similar to trademarks that identify tangible goods, service marks are used to distinguish the services of one person or firm from those of another.

Certification marks are used on or in connection with the goods and services of one or more persons other than the owner of the mark. They indicate that the user certifies origin, material, method of manufacture, quality, accuracy, or other characteristics of the goods and services. They can also indicate that the goods were produced by members of a labor union or other organization.

Patents. Patents are valid government-granted monopolies awarded to inventors that give the patent holder the exclusive right to manufacture and sell the invention for seventeen years. The purpose of patents is to encourage inventors to develop new products and new ideas and to reward them for having done so. Patents are issued by the patent office in Washington, D.C., for all inventions that are useful and original creations. Anyone who manufactures or sells a product that has been patented by another, without permission, can be charged with infringement. The person who profits from unauthorized use of a patent is liable to the patent holder for all the profits resulting from such unauthorized use and for any other penalties provided by the patent law.

Kihm, a publisher of educational materials, invented a unique package that incorporated a device wherein the package itself could be used to hold miniature file folders in an upright position. After a patent search to ensure that the invention had not been previously registered, a patent was granted to Kihm. Later, another publisher began packaging instructional materials in the same format. In this case, to protect the exclusive use of the invention, Kihm could bring suit for patent infringement.

Copyrights. Copyrights are also valid government-granted monopolies. They are designed to prevent the unauthorized reproduction or republication of creative works of authors, painters, sculptors, musicians, and other artists. The protection lasts for twenty-eight years and may be renewed for an additional twenty-eight years.

A recording company discovered some musical scores that had been published many years previously. The copyright had run out and had not been renewed by the original publisher or the composer or the heirs. The record company produced records without paying the original composer royalties and thus enjoyed a substantial profit. Any complaint by the original music publisher or composer would be without legal foundation because they had failed to avail themselves of the privilege of renewing their copyright for an additional twenty-eight years.

Design patents. Combining some of the characteristics of both patents and copyrights, design patents are awarded to individuals or business firms to protect distinctive designs and to prevent unauthorized copying by others. Design patents have been issued covering soft-drink bottles, wine decanters, silverware patterns, and other unique designs.

Franchises. Another type of legal monopoly is the franchise. A state or the federal government may permit or license a person or corporation to conduct a specific and usually essential kind of business, such as a bus line, railroad, airline, telephone company, insurance company, or bank. Such monopolies are permitted on the grounds that it is in the public interest to allow only one or two companies to operate in a community or area if those companies render a necessary service. These monopolies are subject to a greater degree of regulation than other businesses and are responsible to administrative agencies, boards, or public service commissions.

Cause and Effect

Literature in the business-related fields frequently teaches students to diagnose and correct common problems. Such discussions are generally written in a cause and effect format. Once again, the making of a chart can facilitate notetaking. In this case, causes are listed in one column, opposite the possible effects. The order of the columns is unimportant, and columns may include categories other than "cause" and "effect."

Example: The study of business law includes numerous cause-effect relationships. Note the following text extraction and accompanying chart (Rosenberg & Bonnice, 1976, 70-72).

REMEDIES FOR BREACH OF SALES CONTRACTS

The law provides a number of remedies to protect the buyer and the seller in a sales contract against loss.

Seller's remedies. A seller has several remedies at law depending on the circumstances of the case.

WHEN THE BUYER REFUSES TO ACCEPT DELIVERY OF THE GOODS. When the buyer refuses to accept delivery of the goods, the seller may do one of the following:

1. Store the goods for the buyer and sue to recover the sales price if the goods are not readily resalable to another customer.

2. Resell the goods immediately if they are of a perishable nature or if they might depreciate rapidly in market value and sue the buyer for the difference between the price the goods brought on the resale and the price the buyer had agreed to pay for them.

3. Retain the goods and sue the buyer for the difference between the contract price and the market price at the time the buyer refused to honor the contract.

Hull placed an order with Larkin Tool Company for machinery of special design for his factory. When the machinery was ready for delivery, he notified the manufacturer that he was canceling his order. Larkin has the right to hold the machinery for Hull and sue him for the contract price.

WHEN THE BUYER REFUSES TO PAY THE PURCHASE PRICE. When the buyer refuses to pay the purchase price, the seller may do one of the following:

1. If the seller still has possession of the merchandise, resell it after a reasonable period of time and sue for any damage incurred.

2. If the merchandise has already been delivered to the buyer, sue for the purchase price.

Lenroot bought a slide projector from the Parker Company, agreeing to pay cash for it. The Parker Company insisted on retaining possession of the projector until the bill was paid in full. When Lenroot failed to pay for the projector within the specified time period, the Parker Company sold it and sued Lenroot for the difference between what it reveived for it and the sales price to Lenroot. If the projector had been sold on credit and the credit period had expired, the Parker Company would have the right to sue Lenroot for the contract price.

WHEN THE BUYER IS INSOLVENT. Sometimes after goods have been shipped to the buyer but before actual delivery has been made by the carrier, the seller learnes that the buyer is insolvent--that is, unable to pay his or her debts. In the case of insolvency of the buyer, the seller is given the right of stoppage in transit. Stoppage in transit is the right of an unpaid seller in cases in which the buyer becomes insolvent after the goods have been shipped.

Figure 23: Cause and Effect Chart

Breach of Contract Sales/Seller's Remedies

Problem	Effect	Legal Remedy	Example
1. Buyer refuses delivery of goods	Loss to the seller	Store goods and sue to recover sales price	
		Resell goods immediately and sue for price difference	Hull and Larkin Tool Company
		Retain goods and sue for difference between contract and market price	
2. Buyer refuses to pay purchase price	Loss to the seller	Seller can resell merchandise and sue for damage	Lenroot and The Parker Company
		Seller can sue for purchase price if goods were delivered	
3. Buyer is insolvent, or cannot pay debts	Loss to the seller	Seller can stop goods in transit	

Example: Literature concerning business principles frequently includes cause-effect relationships. In the following text excerpt (Everard & Shilt, 1979, 23-25), a discussion of the impact of social problems on business operations is given; population is emphasized. Note the accompanying chart.

SOCIAL PROBLEMS AND BUSINESS

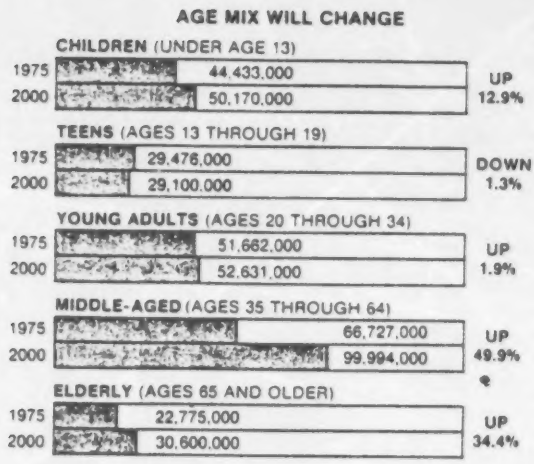
Population

The gross national product cannot grow unless there are sufficient people to provide the necessary labor force and to buy the goods and services produced. Population statistics enable businesses to plan how much and what kinds of goods and services to offer. However, the GNP of a country must grow at a faster rate than its population if the level of living is to be raised. Not only is the size of the population important in business planning, but so is the nature of the population.

Growing Population. The population of the United States has grown steadily over the years, as can be seen in Illus. 2-1. However, the rate of growth is expected to drop during the last 25 years of this century. In time, the United States Bureau of the Census expects the birth rate to drop to a level of Zero Population Growth (ZPG), the point at which births and deaths balance out. Nevertheless, with ZPG, the population will continue to grow because people will live longer due to improved health care.

Changing Population. Not only is the total size of the population important to business, but so is the makeup of the population by age. Since the birthrate changes from time to time, there is also a change in the number of people in different age groups. As can be seen in Illus. 2-2, the age mix of the population is shifting. In fact, there will be a major change in the number of people in different age groups by the end of the century. By the year 2000, there will be a slight decrease in the number of teenagers and a great increase in the number of people aged 35 or more.

Because the kinds of goods and services that people use at different age levels change somewhat, business firms must be ready to change as the age mix of the population shifts. A business that specializes in selling goods for a particular age level will be affected if the number of people in that age group greatly increases or decreases. For example, during high birthrate periods a business that sells baby goods must grow to meet customer demand. With a dropping birthrate sales will decline. To offset the decline, the business might find it profitable to also sell special foods to people in an age group that is growing in number, such as those aged 65 or more.



Source: United States Department of Commerce

Illus. 2-2. Business firms must expect changes in the makeup of the population.

(Everard & Shilt, 1979, 24)

Moving Population. Another feature of the population is that people move often. Each year millions of people change their addresses. In a recent four-year period, over 40 percent of the population had moved. However, the majority of mobile Americans moved within the same county or state. Those who moved long distances tended to go to the Sunbelt--the southern warm half of the country.

In the past, people tended to move mostly from rural to urban areas. People are still doing this today but in smaller numbers. The popularity of urban life is revealed by the fact that three out of four people live in a city or suburb. There is a recent trend, however, for those living in urban areas to move a little beyond the suburban fringe back into the rural areas but still near metropolitan centers.

The concentration of the population has caused a variety of problems. Making wise use of limited land for homes and businesses is one. Another problem is that of transportation. How to move people and goods efficiently in heavily populated areas has received much attention by business and government. Arising from densely populated areas are other social problems, such as providing adequate medical, recreational, and educational facilities.

Figure 24: Cause and Effect Chart

SOCIAL PROBLEMS AND BUSINESS/POPULATION

Social Problem	Effect on Business	Improvement
1. Insufficient people for work force and purchase of goods and services	Gross National Product will not grow and level of living will not be raised.	Improved health care can increase life span and population will continue to grow.
2. Change in number of people in different age groups	Some businesses may not sell products and GNP will not grow.	Business firms must expect change in population makeup and adjust goods accordingly.
3. People move often and population becomes concentrated	Limited land for homes and businesses Moving people and goods efficiently--transportation Providing adequate medical and educational facilities	

Example: Data processing manuals also present discussion of causality. These usually relate mechanical or programming errors and their causes. A two or three column chart can be recorded, which will focus the student's attention on the casual relationship. Additionally, it is useful to have a ready reference for certain key information.
Note the following excerpt and accompanying chart.

If a character does not code properly a grounding clip lead at the character encode driver output will enable a static check for those diodes which should be conducting for the code. By grounding two or more such points the multiple detection circuitry can be checked. The reference voltage at the multi-recognition comparator should be approximately 3.5 volts. Two or more characters the voltage level should drop to approximately 2.5 volts or less causing the comparator output to become "high" which gates to the controller through the interface a multi-recognition bit ($CC2^{10}$) active. (Scandata, 2250/1 Troubleshooting, 15) (OL, #4, 12, 42)

Figure 25: Cause and Effect Chart

Problem	Troubleshooting
Character codes incorrectly	grounding clip lead at character encode driver output to check circuitry. Voltage should be 3.5 (2.5 for two or more characters)

Exercise C:

1) On a separate piece of paper, construct a cause and effect chart based on business law (Rosenberg & Bonnice, 1976, 72-73). This is a continuation of the given example; you will construct a chart regarding the buyer's remedies in a breach of contract sales. You may use the same categories as indicated in the example, or choose your own.

REMEDIES FOR BREACH OF SALES CONTRACTS

The law provides a number of remedies to protect the buyer and the seller in a sales contract against loss.

Buyer's remedies. A buyer has recourse to certain remedies depending on the specific situation.

WHEN THE WRONG QUANTITY IS DELIVERED. The buyer may reject the delivery of a smaller quantity of merchandise than ordered and sue for damages or keep the quantity delivered and sue for damages, which would be the lost profits the buyer could show would have resulted from the sale of the undelivered portion. If a larger quantity of merchandise than ordered is delivered, the buyer may reject the entire shipment, accept only what was ordered and reject the rest, or accept the entire shipment and pay for it at the contract price.

Instead of receiving thirty-six toasters as ordered, Home Outlet Stores received from a manufacturer a shipment containing fifty-four toasters. When Home Outlet learned that the wholesale price had increased substantially since the order was placed, it decided to keep the entire shipment and pay for it at the contract price. Home Outlet has the right to do so.

WHEN THE GOODS ARE NOT AS ORDERED. The buyer may return goods that are not as ordered. If the goods have already been paid for, the buyer may demand a refund of the purchase price and, in most states, sue for damages for breach of warranty. Or the buyer may keep the goods and sue for damages for any loss resulting from the seller's breach of contract.

Chester received from Lincoln Supply Company a shipment of merchandise of a poorer grade than was contracted for. If Chester has not paid for the goods and decides to keep them, she may deduct the damages from the contract price

WHEN THE SELLER FAILS TO DELIVER THE GOODS. When title has passed to the buyer for goods the seller has failed to deliver, the buyer has two remedies. One is to sue to recover damages by bringing an action for conversion, that is, an action to recover damages from a person who has unlawfully assumed ownership of property belonging to another. The amount of damages sought would be the value of the goods at the time of the seller's refusal to deliver. If the buyer wants the goods that are rightfully his or hers rather than money damages, the buyer can sue to obtain them by bringing an action of replevin, that is, an action to recover possession of specific goods wrongfully taken or detained by another.

Andrews, a retail television dealer, selected and purchased thirty sets from a distributor on thirty days' credit. The sets were set aside for Andrews and immediate delivery was promised. Because of a sharp rise in manufacturer's prices, the distributor refused to deliver the sets according to contract. Andrews can sue the distributor for the difference between the contract price and the increased current market price by bringing an action for conversion. Or, if the sets are in short supply, he can institute an action of replevin for delivery of the sets rightfully belonging to him.

WHEN MONEY DAMAGES WILL NOT ADEQUATELY COMPENSATE THE BUYER. In the case of goods that are unique and not available elsewhere, since only performance of the sales contract will satisfy the buyer, he or she may seek a decree of specific performance in a court of equity.

Turner, a retired school principal, saw in a store which deals in new and antique merchandise a well-preserved set of the McGuffy Readers that were popular at the turn of the century. He decided to buy the readers and present them to the library of his former school as a gift. The owner agreed to sell the books to Turner for $30 and accepted $5 as a binder. When Turner returned for the readers the next day, the dealer told him that he had changed his mind about selling them and offered to return the $5. Turner was determined to get the books and asked his lawyer to seek a decree of specific performance. Turner should succeed in getting the decree.

2) On a separate piece of paper, construct a cause and effect chart based on the social environment of business (Everard & Shilt, 1979, 25-26). This is a continuation of the given example on population and business. You will construct a chart for the effects of employment, education, and equality on business operations. You may use the same categories as indicated in the example, or select your own.

Employment and Education

A large labor force is necessary to support a large GNP. As the population grows, the labor force also grows. The labor force is defined as all people who are available for work, whether they are employed or unemployed. Not included in the labor force are people under 16 years of age, full-time students, homemakers, and retired people. In a recent year there were about 94 million workers in the total labor force including the armed forces. The growth in the labor force may be seen in Illus. 2-3. The GNP must increase if people are to be employed.

With improved technology has come the need for more skilled employees. The demand for accountants, secretaries, managers, and other business specialists, for example, has never been greater. To become skilled usually means that workers need to be educated. More and more Americans, as a result, are going to school longer than ever before and are becoming trained in specialized jobs.

While the demands for skilled workers has been rising, the need for unskilled workers has been falling. A problem for business is finding adequately trained employees. Education and specialized training, therefore, must be readily available in a highly industrialized society.

Equality for Women and Minorities

Equality for all is one of the basic principles on which this country was founded. Yet equality has not been a reality for two large groups of people: minorities and women. While serious efforts have been made to reduce this imbalance, the problem still exists. Women and blacks, for example, hold a relatively small number of professional and technical jobs. The average difference in income between men and women and between blacks and whites are still large, although corrective forces are at work to reduce them. The passage of federal and state laws and the improvement of educational opportunities have provided partial solutions. Many factors within society have a bearing on the problem, and business as a social institution must play an important role in arriving at a solution.

3) Construct your own chart for this data processing problem. Use the given example (data processing) as a model.

When a non-recognition occurs and all codes for recognition are present in the FCR as shown by the Conrac display it is usually indicative of a failure in the FDM section. The problem can be isolated in most cases by removing the FDM boards, one at a time initially, until recognition takes place. Care should be taken when replacing diodes or adding diodes for new design of the FDM board that they are placed in the proper direction, that is, with the cathode (end with the band) always connected to the horizontal line. This is the only place in the system where this occurs. Diode masks Feature Matrix, Character Encode, Feature Encode Matrix boards all connect the cathode to the vertical. If a multi-recognition occurs it is best to approach the problem, here again in H/T Display mode, by turning off the character that should recognize by grounding the character encode driver input. It then becomes a matter of checking the Feature Code Register against the FDM boards. (Scandata, 2250/1 Troubleshooting, 15) (OL, #4, 12, 42)

Exercise D: Suggested Reinforcement Activities/Textbook

I. Select three sections from the material you will assign to your students in the textbook. These sections must include each of the logical relationships discussed above (classification, comparison, cause-effect). Record the location of each relationship of each section; on separate paper complete a note chart of each, using given examples as models.

A. Classification

	Pg.#	Topic
1.		
2.		
3.		

B. Comparison

	Pg.#	Topic
1.		
2.		
3.		

C. Cause-Effect

	Pg.#	Topic
1.		
2.		
3.		

II. Devise an evaluation form to assess the performance of practical application of an important concept or procedure which should be learned. You, as teacher, could use this form in evaluating student performance, or each student could measure their own performance. (You may want to use the included evaluation form in this section as a model.)

Procedures: Teaching Student To Recognize and Record Complex Information

Recognizing and recording complex information require higher-level comprehension skills, and are best introduced after the instruction and practice of paragraph comprehension. The three different relationships, together with the notetaking charts, should not be presented simultaneously. Students need to clearly understand the skill of classification, of comparison, and of cause-effect. Each skill with its appropriate notetaking chart should be introduced on a separate day.

With charting, explain that there is a definite relationship presented. This will help the students to recognize how to design the charts and to understand the organization of the material. Students need to know that one aspect of the relationship makes up one axis of the chart, while another aspect, the other axis.

If your text already presents charts or outlines of these types, the appropriate one should be presented first each day, followed by sample paragraphs or sections from which the students can construct charts as a class. Related homework assignments should be given as soon as the appropriate text selections are covered.

SECTION 8
DEVELOPING STUDY/READING SKILLS

DEVELOPING STUDY/READING SKILLS

Purpose:

Students of occupational skills need to develop certain study/reading behaviors to get the most from their reading materials. As a vocational teacher you can introduce these study techniques so that students can develop better study/reading habits. The following techniques are not difficult to instruct or to practice, but they will require repetition to be performed well. Some may seem awkward at first because of their newness, but students will become comfortable with them as they practice. When these techniques are used with student's own assigned reading materials, students should be able to see the benefits.

,) The Preview Procedure

A. Previewing the Entire Text

Have the students become acquainted with the total textbook before they begin reading individual chapters. They should be familiar with the overall contents of the book, the organization, and the aids which the author has provided. This would be assigned at the beginning of your course. A suggested format for previewing the entire text is included i Suggested Reinforcement Activities/ Textbook in this section. This serves as a practical activity for you and can be used with your students.

B. Previewing the Text Chapter

The technique of previewing is getting an "overview" or a "general idea" of what the reading material is about -- before it is read. Previewing is performed by skimming, or moving the eyes and the mind very quickly over the information. Previewing before reading allows the student to see the big picture, to see what the author is going to discuss, and how the material is organized. Having this information before he/she reads helps the student to have improved comprehension during reading.

Previewing should be done quickly since students are to skim the material -- and not read it carefully. Therefore, students should spend no more than 5 minutes previewing a text chapter by skimming certain highlights the author has provided.

To obtain a quick overview, students should use the following guidelines:

Chapter title; illustrations, graphs, etc. plus captions; introduction; conclusion; bold, italicized print; subtitles; questions at the end.

You could initially introduce the guidelines for previewing. Then have the student practice the skill on chapters to be read. Time students for 5-7 minutes. At the end of the time limit, ask students orally what they found out and discuss as a group, or ask students to write down what they learned about the chapter in those few minutes - words, phrases, names, complete ideas, etc. The recall should be done from memory since this forces the student to be more responsible for the information. As the class practices previewing, they will remember more with the same given time period.

Previewing is a very useful skill, and it does not require additional materials or large amounts of time. As an effective study technique it is largely recommended for classroom use. Students gain much more from their reading when they have ideas of what will be included in their reading than when they read "cold."

2) Recitation

Recitation is an oral or written recall (from memory) of material read. It is a helpful technique for students since it forces them to learn and remember the material rather than copy it. They will have to assume responsibility for the information since they are working from memory.

Benefits of recitation are improved concentration and comprehension.

Recitation can be a short activity of 2-3 minutes or it can last longer -- depending upon the task and the material. At first students will feel awkward utilizing this technique because they have had little practice with writing from memory. They will become more comfortable and be able to recall more, as this skill is repeated.

Begin small and build. At first have students read 2-3 paragraphs and then write. Gradually increase the amount of reading. Practice this skill with your students throughout the course st that there is development.

The skill of recitation can be used in a variety of ways within your classroom. It is helpful at anytime when you want students to be involved, to learn and to remember material.

Possible activities include recitation:

1. after a chapter preview
2. on an important section of information that needs to be reinforced and remembered,
3. periodically during reading of a text chapter,
4. as a review of class notes,
5. on supplementary material read (manufacturer's materials).

Another positive outgrowth of recitation is the written product. The students have organized and recorded thoughts on paper and this can be used for study purposes. This makes their time more efficient.

3) The Combination of Reading and Writing

The skills of reading and writing form a strong partnership. When a student reads material to be learned, he/she needs to write it down so that thoughts become organized and the student has a visual mode for commiting the material to memory. We all need to be "involved" as much as possible to acquire and to learn. Also, when a student writes down what he has read, he becomes aware of what he doesn't know or doesn't understand; he can see the "gaps." This is useful as a study/reading technique.

Involve your students in much writing, and in a variety of ways:

1) Written recitations,
2) Listing of important content vocabulary,
3) Paragraphs using important vocabulary and ideas to be learned,
4) Summaries of information learned about your occupational field from another reading source,
5) Written opinions about concerns and new trends in the occupational field.

In most professional fields, people must write in some form. You can help your students to gain confidence in this skill by giving them lots of practice, and at the same time help them to learn the information more completely.

4) Content Vocabulary Development

As previously mentioned in Developing Vocabulary Skills, "grasping" the content vocabulary is critical to the understanding of the business-related occupational literature. Emphasize throughout your course the need for learning the technical terms. Include them in your class discussions and in your homework assignments. (Refer to the activity suggestions in the vocabulary section of this book.)

5) Effective Reading Technique (Combination of Skills Currently Being Discussed)

We do ask our students to study by themselves because we assume that by this age, they are able to do so. Many individuals, however, have not acquired efficient or useful study skills -- especially for reading textbook chapters.

This section contains a brief overview of a study technique for textbook reading, which was originally devised by Francis Robinson(1970). This technique has defined steps to be done in order, and it is intended to give students opportunity to better read, learn, and remember the information.

A typical procedure for students to use when studying a textbook assignment is to do nothing more than open the book and read the assignment. The more conscientious reader may follow up this initial reading by a second or even a third reading of the same useless type. Research has found a good method for helping the student to read a given selection with better understanding and better recall. It is called the SQ4R method. It involves six basic steps: (1) Survey, (2) Question, (3) Read, (4) Recite, (5) Revise, (6) Review. Each of the steps is discussed under the appropriate headings below:

Survey: (same as preview)

Students use skilling technique to get a general idea of the chapter before it is read. This helps them to concentrate and to feel more involved as they read the chapter. To survey students glance at chapter title, subtitles, graphics, introduction, conclusion, bold and italicized type, questions at the end. Time allowed for survey is approximately 5 minutes.

After surveying, students should write down words and ideas from memory (recitation) -- what they know so far; they can spend 2-4 minutes on this. This helps them to see that they do have information before they begin reading.

Surveying/Previewing is also discussed in this same larger section of Study/Reading Skills under 1-B.)

Question:

Students need guidelines for their reading. Using the information gained from the survey and the subtitles of the chapter, have students devise 7-8 questions. The questions should pertain to information included in the chapter and ones which they feel will be answered by the author. Questions need not be elaborate; their major purposes are further preparation for reading and something for students to look for as they read. Questions are to be written down. This step should take approximately 10 minutes.

Read:

Keeping in mind the information gained thus far from the survey and questions steps, the student begins reading -- looking for answers to the questions formed, and reading to learn the information. He or she is reading for important ideas now that he is study/reading. To hold concentration and to get the most out of the reading, encourage students to read for short blocks of time initially and build gradually. Begin with 10 minutes of concentrated reading.

Recite:

After a certain period of reading time, students should stop and write down ideas from memory (recitation). In this recitation they will include any answers to questions that may have been discovered and the important/main ideas of what they

have read. This step helps them to learn and remember the information. They should keep the reading recitation with the survey recitation and the questions - so that a written sequence of study is available to them. This step will take 5-7 minutes.

Revise:

To insure accuracy students should open their text and see if they have recorded information correctly. Plus, they may want to make some additions of ideas missed. This step will require 2-4 minutes.

* THE READ, RECITE AND REVISE STEPS ARE THEN REPEATED UNTIL THE CHAPTER IS COMPLETE. IT IS IMPORTANT THAT STUDENTS UNDERSTAND TO REPEAR THESE 3 STEPS ONLY. PREVIEW AND QUESTIONS ARE PERFORMED ONCE PER CHAPTER.

Review:

With this technique students have a written product to review. They should periodically review the survey, questions, reading recitations and revisions. When chapter is finished they can review the completed written process for their exam.

Benefits of the SQ4R:

1) Students have a written product for review and do not have to reread the chapter 2-3 times.

2) With so much writing students can learn the information more thoroughly.

3) In writing about what they are reading, students can see areas which are unclear and difficult and can seek help.

4) When students change subtitles within a chapter to questions and then read to answer those questions, much more will be obtained than if they merely read and answer questions at the end of the chapter. Students often copy to answer questions assigned. The process of formulating questions is a thinking exercise which "tunes students into the assignment."

5) Recitation (writing from memory_ after reading helps students to learn information and they must understand it to write it down -- since they must depend on memory.

Teaching the SQ4R:

1. This procedure requires more time than merely reading a chapter, but the long-term rewards are there. Students do not have to reread chapters, just review certain parts. Also, the written notes can be sued for consistent review and cramming the chapter the night before the exam is not necessary. Please emphasize these points with your students.
2. When teaching the procedure, introduce each step adequately. Explain "how" and "why" of each step so students feel comfortable and can recognize the benefits. Do not introduce all six steps at once. For example, on Monday, discuss previewing and practice for 2 days. Then add the question step and practice. Next, introduce the read, recite and revise steps as a unit and assign considerable practice to this. Then the students are ready to do the whole procedure on a chapter they have not read.

3. Use a format for the writing of their information, such as the one in Suggested Reinforcement Activities/Textbook #4. This gives organization to their written notes and definite guidelines for completing the technique.
4. Explain clearly the purpose for utilizing the SQ4R with textbook chapters.
5. Use the suggested time limits when teaching this technique to your students. Encourage them to stick to the time limits when they are working through the SQ4R on their own, since this keeps the system more time-efficient.
6. To be effective, this technique must be practiced over a long period of time. Assign this to be done for much of your reading assignments.
7. Students can work in class and at home with this technique. After the steps are understood, it is a good independent activity.
8. The SQ4R can be used with more than an entire text chapter. It can be used with chapter sections or with occupational handouts. Some adjustment of steps may be necessary - timewise, but the same sequence may be used with most reading materials.

Study Reading Skills

Exercise - Suggested Reinforcement Activities/Textbook

1) A. Previewing the Entire Text

Complete the following information by previewing the textbook which you use in your teaching.

1. Title:

   Author:

   Publisher:

   Copyright Date:

2. What is this book mainly about?

3. Look at the Table of Contents. What major topics are covered in the book?

4. Read the preface or introduction. Briefly, what does it say?

5. What types of graphics are in this text? (diagrams, photographs, charts, drawings, etc.)

6. Is this text well-organized in your opinion? Explain

7. Is this text easy to read or is it more difficult? Why?

8. Does the text have:

Preface or Introduction	_____
Table of Contents	_____
Index	_____
Glossary	_____
Chapter subtitles	_____
Chapter summaries	_____
Activities at end of chapter	_____

B. Previewing the Chapter

Select 3 chapters from the text which you use in your classroom. Allow yourself 5 minutes to preview each chapter. At the end of the 5 minutes, write from memory what you learned. For previewing, use the guidelines listed in the discussion of previewing the text chapter (p.).

*ALSO, TRY PREVIEWING OTHER MATERIAL WHICH YOU HAVE NOT READ, SO AS TO FULLY UNDERSTAND THE SKILLS YOUR STUDENTS WILL NEED TO USE.

Complete the following chart:

Chapter #	Words and Ideas from Preview
1.	
2.	
3.	

2) Recitation

Select 4 sections of information throughout your textbook. Begin small (2-3 paragraphs) and gradually increase to a longer selection (2-3 pages). With each selection, read the material, close your book, and record information from memory (main ideas, important facts, vocabulary words). Use the following chart as a model and record the ideas on a separate sheet of paper.

Page #	Recitation (written)
1.	
2.	
3.	
4.	

3) Content Vocabulary

Select 3 introductory chapters from the text you use with your students. List ten content words from each chapter that are essential to know for understanding of the material.

Chapter #	Page #	Content words
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		

Chapter #	Page #	Content words
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		
25.		
26.		

Chapter #	Page #	Content words
27.		
28.		
29.		
30.		

4) The SQ4R Technique

Select a chapter you will assign to your students. Read the chapter according to the designated guidelines. Try to stick closely to suggested time limits. As you work through your chapter, complete the following form. (This same form should be used by students.)

I. Text title:
Chapter title:

II. Survey Recitation
(Record from memory what you learned in the survey.)

III. Questions
(Give yourself something to look for in the reading.)

IV. A. Reading Recitation I
(Record from memory what you learned during your first reading.)

B. Revisions

V. A. Reading Recitation II

B. Revisions

VI. A. Reading Recitation III

B. Revisions

* Use own paper if more space for reading recitation and revisions is needed. Do remember to read, recite and revise to the end of the chapter.

Procedures: Teaching Students Study/Reading Skills

Study/reading skills lend strong support to being an efficient student. Practice with them will benefit performance in the business-related courses.

The techniques discussed can develop into natural study habits when they are introduced gradually, reinforced strongly and practiced throughout the course. The techniques do not necessarily require extra time, just different procedure.

To become personally familiar with the suggested study/reading behaviors, practice them by completing the activities included in "Suggested Reinforcement Activities/Textbook." When you feel comfortable with the techniques, pass them on to your students. You may use the same activities with them, since the exercises are specific to the skills, but possible for a variety of materials.

SECTION 9

GUIDELINES: MAKING A READING ASSIGNMENT

GUIDELINES/ MAKING A READING ASSIGNMENT

As was discussed earlier, students need guidance to acquire "the most" from a reading assignment. The SQ4R Method was described and recommended as an effective study/reading technique for business-related text materials. This method is good for independent student work.

If you have a section of a text chapter, an essay, or a shorter occupational selection that you wish to cover in class as a total group activity, you can use the same procedure, but in an adapted form. Remember that it is important to "direct" the reading assignment; students will gain more, and you will see better results.

The following steps are suggested for directing a reading assignment:

1) Readiness

   A. Ask students questions related to the topic to be read: "What do you know about . . .?" "Have you ever read about . . .?"

   B. Ask students questions concerning personal experiences related to the selections: "Have you ever gone to the dentist and felt fear?" Explain your ideas about . . . based on your past experience." "As a child did you ever . . .?"

   C. Introduce and discuss vocabulary terms which are important to the understanding of the reading. Place these on the board. Ask students if they know anything about any of the words; this will initiate discussion and you can briefly explain those terms that are totally unfamiliar.

   D. Have students preview by glancing quickly over the material to get a general idea of what they will be reading about. Discuss as a group what the preview indicates will be contained in the material.

2) Purpose-Setting

Ask students to read for a specific purpose or purposes. Place a question on the board for them to keep in mind when reading. Looking for specific information will help them to concentrate more on the entire reading asisgnment. Also, ask students to add one or two questions to the purpose-setting, based on their preview and what they feel will be contained in the selection.

3) Silent Reading (Directed Reading)

Students will read the material silently, keeping in mind the vocabulary, the preview, and the purpose-setting. They have been prepared for the reading and now their reading is directed.

4) Purpose Check

Ask students for answers to the purpose-settting questions. This may result in a comprehensive class discussion, in which students ask more questions and misconceptions are clarified.

5) Oral Re-reading

Ask students one or two questions in which the answer needs to be read aloud from the selection. Students will need to skim for the specific answer and this serves as a review. This task is appropriate for concepts which are more difficult and need to be reinforced.

6) Comprehension Check

If there is much information to be learned in your assigned selection you may want your students to answer more questions, written or oral. (In some cases the "purpose check" discussion will be sufficient.)

If you think more feedback is necessary, you can develop different levels of questions to evaluate comprehension.

Examples:

a. Why?

b. How?

c. Opinion question

d. Vocabulary or phrases

e. Completion

f. Essay

g. Inference - not directly stated -
"From the selection you can tell . . ."

7) Follow-up Activities

During this step the students are expected to increase their knowledge and use the information gained during the directed reading. Here the students apply the information so that it can be learned and remembered. Suggested activities are:

a. Writing assignment,

b. Further reading in other sources on the same topic,

c. Research project-library,

d. Interviewing a person who is informed on the topic.

Discussion: Helping Students Get More Out of a Reading Assignment

These suggested steps in directing a reading assignment may seem awkward or too time-consuming upon first review. However, the process of preparation through follow-up is sequentially constructed for improved comprehension with a reading assignment. The process lends much guidance to a reading selection as a group activity, and both you and your students will see the benefits.

SECTION 10
FURTHER SUGGESTIONS: READING SKILLS DEVELOPMENT

FURTHER SUGGESTIONS/ READING SKILLS DEVELOPMENT

There are many components of effective reading skill development. These should be considered when integrating reading skills with the occupational content. This guide has covered skill areas of vocabulary, comprehension, and study-reading.

Following are suggestions for certain procedures which can be additionally beneficial in the instruction of reading skills:

A. Increased Student Responsibility

Skills require practice, and student responsibility in the improvement of the instructed skills should be emphasized. Make extensive outside assignments of the suggested activities introduced in this text, as well as practice in the classroom. Students will be using the occupational materials which you wish them to know, so extra planning for you is minimal. Plus, the "manipulation" of the material through the skill practice will help students to really learn the information required in the business-related field.

B. Evaluation of Activities

With the recommendation of many assigned skill activities, you may wonder how you will grade them. There are ways to give students ample responsibility and avoid the "not enough time to grade" dilemma.

1) Not all assignments must receive a letter grade. Some activities are assigned strictly as practice and should only receive a credit grade for completion. The practice, however, should be accompanied with class discussions of specific guidelines for practicing the skill and of problems which arise as students work with the skills. (Credit Grades: + ✓+ ✓ ✓-)

2) Students, after having guidelines for performing the skills, can work in pairs and evaluate each other's work. Students often encounter the same difficulties and can help each other better understand what to do.

3) Explain to your students that some assigned work is for practice over a period of time and must be compiled as a notebook for a composite grade. Students would begin with the easier skills and build to the more difficult ones -- using the materials which are required for your course. With this, evaluation occurs less frequently.

C. Student Evaluation

Increased student responsibility can also include written evaluation of activity and/or of own performance. Have students evaluate certain units of study or sets of skill activities. Their input can help you to make improvements and to better recognize some of their needs. Set up specific criteria, such as "excellent, very good, satisfactory, unsatisfactory" -- as an overall rating. Then ask for specific comments as to strengths, needed improvement, possible additions, etc. These same ideas can be transferred to a self-evaluation form for performance on an activity or group of activities.

Student evaluation forms can be simplistic so that exact guidelines are known, and so that students feel comfortable with this process. With the evaluations, students can have more input into course planning and can become more aware of personal performance.

D. Instructing Skills Together

The major reading skill areas mesh well together, and can be combined effectively in instruction. Vocabulary does not have to be developed separately from comprehension. For example, contextual analysis can be introduced and practiced briefly, and then the main idea could be presented. These two skill areas could be practiced together on the same selection, or could be done on different materials, but within the same class period.

Vocabulary, comprehension and study/reading skills can be combined throughout your course. Students will be able to see how skills do depend on each other and that reading skill development is a total package -- which should be continued as such.

E. Writing Skills

The importance of increased writing experience has been discussed earlier in "Developing Study/Reading Skills."

Writing involves the student more in the material to be learned, helps the student to organize thoughts and to understand and remember the information, and provides practice for a skill which is considered deficient in much of our population. Integrating reading and writing skills should add a well-rounded dimension to your vocational instruction.

A useful activity with writing skills is to have your students write in their own words. Here, the students must understand the material. Repeated practice will enable them to build confidence and to greatly improve their ability to write in their own words.

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